THE OIL WEEKLY

ENGINEERING « NEWS » STATISTICS

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The Oil Man's Calendar

JULY 12-13	Seventeenth International Geological Congress, Moscow, U.S.S.R. Interstate Oil Compact Commission, Santa Fe, New Mexico.
AUG. 10-15	Third Michigan Oil & Gas Assn., Mt. Pleasant.
SEPT. 15-17	National Petroleum Association, Hotel Traymore, Atlantic City, New Jersey.
16-19	Pacific Oil Show & Black Gold Festival, Taft, California.
SEPT. 27 OCT. 1	American Gas Association, Cleveland, Ohio.
OCT. 11-15	Twenty-Sixth National Safety Congress & Exposition, Kansas City, Missouri.
11-16	Oil-World Exposition, Houston, Texas.
13-14	Indiana Independent Petroleum Association, Indianapolis, Ind.
14-16	American Association of Petroleum Geologists, Mid-Year Meeting Pittsburgh, Pennsylvania.
14-16	Independent Petroleum Association of America, Houston, Texas.
18-22	American Welding Society, Atlantic City, New Jersey.
21-22	Michigan Petroleum Association, Traverse City, Michigan.
29-30	Mid-Continent Oil and Gas Association, Texas Division, Dallas, Texas.
NOV. 8-12	American Petroleum Institute, (Annual), Chicago, Illinois.
1938 MAR. 16-18	Annual Meeting, American Association of Petroleum Geologists, Roosevelt Hotel, New Orleans, La.

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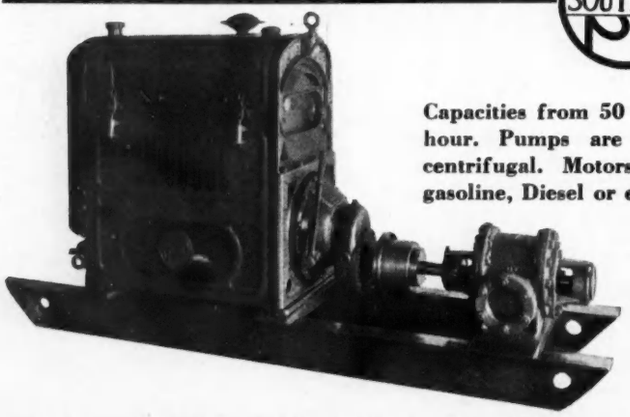

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LOOKING AHEAD

WITH THE EDITOR

Control of High-Pressure Gas Wells . . .

Abuse of Water Pumps . . .

Full Diameter Mud System . . .

REGULATION of deliveries when taking small quantities of gas and the resultant freezing has been a constant problem in recent years when many wells with high rock pressures have been completed.

One large gas company has overcome this and allied difficulties by the installation of a cutting device to regulate deliveries and reduce pressures, a hot water heater to eliminate freezing, separator connections and drips to remove the fluid, and an orifice meter to procure measurement.

These installations are to be described by an engineer of the Cities Service Gas Company.

WHEN a water pump fails the operator is at fault, at least 8 times out of 10.

Considering the thousands of dollars expended each year in replacements that could be postponed or avoided, proper maintenance and care of this equipment becomes apparent even to a man with a blunt pencil.

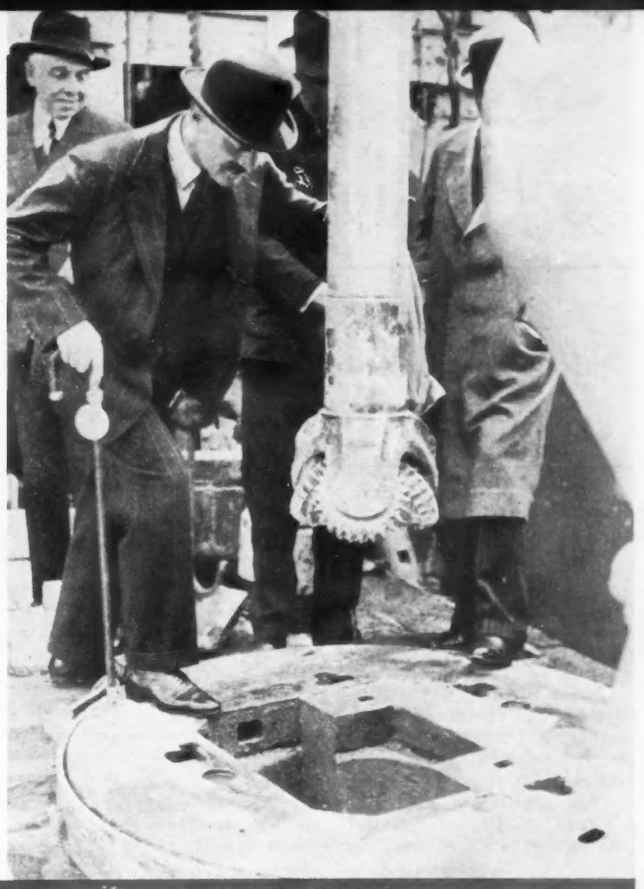
How pumps are abused and the fundamentals in avoiding that expense is the subject of an article which has real suggestions to offer in lowering operation costs. It will appear in the next issue.

WHAT advantage is there to use large slush pumps and tool joints with full size openings, if pipe connections, rotary hose and other passages in the mud circulating system have restricted diameters? This was the question a Gulf Coast drilling contractor asked himself. As a result he equipped one of his rigs with full-size openings all the way to bottom. He even carried the idea further by eliminating all sharp bends that might create friction against the volume discharged by the pumps. The result has been faster drilling, reduced pump pressures (which resulted in higher pumping efficiency and less maintenance cost) greater bit pressure, increased volume of circulation, and smaller steam consumption. This improved circulating system will be described in an article that also discusses the advantages he has gained by its use.

THIS WEEK

ENGLAND'S OWN SUPPLY of oil has long been its wish, and the starting of a test in the country has attracted official notice. Lord Apsley, who was acting for Sir Thomas Inskip, minister for defense, is photographed here while witnessing the start of Anglo-American Oil Company's Grove Hill 1, at Hellingly, Sussex.

—International News Photo.



OIL production allowables for July have been established by all the states, and it is encouraging that they adhere more closely to the recommended quotas of the Bureau of Mines than in the past. Oklahoma, Kansas and California quotas were set at the exact figures suggested by the Bureau; while Texas Louisiana and New Mexico set allowables but slightly in advance. This indicates that the industry will fully maintain the favorable statistical position it now occupies. **Page 10.**

INDICATIONS are that oil company earnings in 1937 may virtually duplicate those of 1929. Factors pointing toward this end are profits for the first half of the year, promise that the favorable situation will continue, and the uninterrupted upward trend of earnings during the past several years. **Page 15.**

ALTHOUGH an appeal probably will be made, it now appears that O. H. Carlisle, Gulf Oil Corporation official, will be required to stand trial at Madison, Wisconsin, where he, and numerous other oil company executives have been indicted for alleged violation of the anti-trust laws. Last week Carlisle lost in another attempt to prevent his removal, when a federal judge overruled a habeas corpus petition. **Page 11**

TWO motions for rehearing in the Texas anti-trust suit against 15 companies and two trade associations were filed last week. One set forth alleged errors and laid a broad predicate for appeal to the United States Supreme Court, while the other sought to clarify the grounds upon which the concerns are to be tried. It now appears that the case cannot come up for district court trial before 1938. **Page 11**

CURRENT SITUATION

(Latest Available Weekly Data)

Outlook. — Strict crude control program for July is encouraging.

Crude Market.—Remains firm.

Refined Oil Markets. — Gasoline market still unsettled.

Crude Production.—Down 4700 to 3,511,650 barrels.

Crude Runs to Stills.—Down 85,000 barrels daily.

Crude Stocks.—Up 266,000 barrels to 307,465,000.

Gasoline Stocks. — Down 1,147,000 barrels.

Gas and Fuel Oil Stocks.—Up 1,180,000 barrels.

Drilling.—Completions last week 521, down 95.

See* MARKET SECTION *for Details

DISCOVERY of three new fields in Illinois in 1937 make the prospects for additional oil production in the state brighter than in many years. Consequently, the state is experiencing a leasing and drilling revival that has reached an advanced stage. Two of the new discoveries are considered of outstanding importance because they are near the deepest part of the Illinois basin, and have revised previous contour maps of the area. **Page 19.**

FROM magnetic investigations, which are to a great extent supported by surface geological considerations, it appears that a number of gentle structures may be found in northeastern Arkansas and western Tennessee that should be worth testing for oil. The most likely producing formations are considered to be the Pennsylvania, Mississippi, Devonian and Ordovician horizons, although Tertiary and Cretaceous sediments have a fair chance of having oil accumulations. **Page 26.**

FORTUNATELY a gas regulator is a device that does not require exceptional maintenance attention, but on the other hand this very fact causes them to be neglected frequently to the extent that pressure regulations cease completely. No set rule can be laid down for inspection and care operations, as this varies due to operating conditions. However, when given the care to which they are entitled, satisfactory service results. **Page 34.**

Production Allowables

States adhere closely to Bureau's suggested production in establishing July allowables, thereby making outlook for oil favorable.

THE exceptionally favorable statistical position that the oil industry now occupies very likely will be fully maintained at least for another month, as state allowables for July promise to result in a close balancing of crude production with market requirements.

Under the July allowables, practically the same degree of restraint on the country's oil wells will prevail as in June; and the June allowables were sufficiently strict to hold production virtually within market demand.

Proof of the effective balancing of production with demand in June is furnished by the figures on crude oil stocks. In the three weeks from May 29 to June 19, stocks of crude oil in the United States increased 1,020,000 barrels to a total of 307,465,000 barrels.

Control Stricter Than Before

Prior to June, the officials of the leading producing states were less strict in fixing allowables, failing to adhere closely to the Bureau of Mines forecasts of demand. Consequently, crude output was materially exceeding demand, and the excesses were going into storage. In February, March, April, and May, crude was being run into storage at an average rate above a million barrels a week. The stocks increased about 20,000,000 barrels within the period, rising above 306,000,000 barrels.

Those heavy additions to storage finally caused considerable anxiety, and state allowables were tightened in June. The tightening proved effective, as indicated above; and now it is proposed to continue the strict control through July.

Allowables Near Demand

The six leading producing states, which yield 92 percent of the national crude oil production, have prescribed for July, state allowables that in the aggregate are only 34,926 barrels a day, or 1.1 percent, above the Bureau of Mines forecast of market requirements. That represents about the same strictness of control as in June, when the six states had combined allowables 29,412 barrels a day, or 0.9 percent, above the indicated demand. In earlier months of the year, the control was not so strict, as shown by Table 1.

TABLE 1

Combined Allowables of 6 Leading States vs. Bureau of Mines Recommendations.

(The 6 states include: California, Kansas, Louisiana, New Mexico, Oklahoma, Texas.)

MONTH	Indicated Daily Demand	State Allowable Production Daily	Excess of State Allowable	Percent Excess
1937				
January	2,770,700	2,882,181	111,481	4.0
February	2,835,300	2,983,596	148,296	5.2
March	2,924,400	3,096,142	171,742	5.8
April	3,006,600	3,081,699	75,099	2.5
May	3,083,100	3,179,836	96,736	3.1
June	3,109,900	3,139,312	29,412	0.9
July	3,159,700	3,194,628	34,926	1.1

TABLE 2

Effect of State Allowables on Crude Oil Stocks.

PERIOD—	Barrels Crude In Storage
January—	
January 2, 1937	287,659,000
January 30	285,384,000
Change in period	— 2,275,000
February—	
January 30	285,384,000
February 27	288,121,000
Change in period	+ 2,737,000
March—	
February 27	288,121,000
April 3	297,374,000
Change in period	+ 9,253,000
April—	
April 3	297,374,000
May 1	303,249,000
Change in period	+ 5,875,000
May—	
May 1	303,249,000
May 29	306,445,000
Change in period	+ 3,196,000
June—	
May 29	306,445,000
June 19	307,465,000
Change in period	+ 1,020,000

Storage Additions Reduced

The effectiveness of the crude control program of June is indicated by the Bureau of Mines weekly reports on United States crude stocks. Those reports show that between May 29 and June 19, with the June allowables in effect, only the comparatively small amount of 1,020,000 barrels of crude went into storage. Figures are not available for the closing portion of the month, but figures on crude production and on runs of crude to refinery stills indicate that no material change in crude stocks occurred between June 19 and the end of the month.

The heavy additions to crude oil storage, under the lax allowables of February, March, April, and May, and the virtual elimination of the runs to storage in June, under stricter allowables, are shown in Table 2.

States Cooperate

As in June, the leading producing states have shown good cooperation in fixing allowables for July. Three of the states, California, Kansas, and Oklahoma, prescribed allowables conforming exactly with the Bureau of Mines estimates of market demand. Texas and Louisiana adhered very closely to the federal government recommendations. New Mexico's July allowable is farther above the indicated demand than that of any other state, but the excess is only about the same as in June.

Table 3 shows the relation between state allowables and indicated demand for July, and gives for comparison, the similar figures for June.

TABLE 3

State Allowables vs. Bureau of Mines Forecast of Demand in July and June

(Barrels Daily)

Month and State	Bureau of Mines Recommendation	State Allowable at Beginning of Mo.	Excess of State Allowable	Percent Excess
June, 1937:				
California	585,900	603,900	18,000	3.1
Kansas	190,700	190,700	.....	...
Louisiana	252,000	254,650	2,650	1.0
New Mexico	102,000	114,500	12,500	12.2
Oklahoma	625,300	625,300	.....	...
Texas	1,354,000	1,350,262	‡3,738	‡0.3
Total Six States	3,109,900	3,139,312	29,412	0.9
Total Nation	3,366,000	.....	.....	...
July, 1937:				
California	605,500	605,500	.....	...
Kansas	195,600	195,600	.....	...
Louisiana	253,000	263,850	10,850	4.3
New Mexico	100,800	114,500	13,700	13.7
Oklahoma	629,700	629,700	.....	...
Texas	1,375,100	1,385,476	10,376	0.8
Total Six States	3,159,700	3,194,626	34,926	1.1
Total Nation	3,423,800	.....	.....	...

‡State allowable below Bureau of Mines allocation.

Oil in the Courts

File two motions seeking rehearings in Texas anti-trust suit . . . Carlisle ordered removed to Madison . . . To try Yates vacancy dispute.

MAJOR oil companies last week continued their legal battle against two different anti-trust charges. At Austin, scene of a suit in which the State of Texas is seeking $17,000,000 and ouster proceedings against 15 concerns and two trade associations, two motions for rehearings were filed by defendants. These were awaiting action at the close of the week. One more chapter in the Madison, Wisconsin, trust case, in which the federal government is charging 24 companies and numerous officers with violating the law, was written when a defendant seeking to resist his removal lost in another one of his pleas.

Motions in Texas suit

Of the two motions for rehearing filed in the Texas suit, the main one was an "omnibus" bill signed by all attorneys. Written by Charles Black of Austin, it carried the notation that other attorneys desired to file briefs in its support. The court usually grants these requests. This motion was confined solely to a bare statement of alleged errors, and lays a broad predicate for appeal to the United States Supreme Court. Every alleged error carried the additional charge that the court rulings had violated the due process clause of the Federal constitution.

Ask Grounds for Charges

The other motion drew the most attention. It appealed to the Texas Supreme Court to determine upon what issue defendants were to be tried in district court.

This motion was noteworthy because it asked only that the defendants be advised whether they are to be tried for adherence to the "code of fair practices" promulgated by the Federal Trade Commission, or upon alleged secret agreements made outside the code. It did not urge the court to reverse its two previous fundamental findings—first, that the Texas anti-trust laws are constitutional, and second that the state's original petition was not subject to a general demurrer.

This motion was filed by Shell Petroleum Corporation and Shell Union Oil Corporation. At one time, the motion declared, the oil companies would be advised by state counsel that they were accused of adherence to the code; at another time, the grounds would be alleged secret agreements outside the code; at still other times the charge would combine both allegations.

Shell's motion took exception particularly to the Texas Supreme Court's expression that the code was "strongly suggestive" of monopolistic practices. "The Federal Trade Commission," said the motion, "of course, was not approving rules which in its opinion would tend to restrain trade. It was approving rules which, in its opinion, tended to free trade from various restraints and abolish destructive practices. If this fundamental purpose in the adoption of codes is ignored, it will be impossible to explain the activities of the commission.

"The court has merely adopted the economic philosophy of the attorney general (of Texas) without in any way discussing that of the Trade Commission. It is impossible to reach a just conclusion in this matter unless one is familiar with the activities of commission, which proposed to do away with various subterranean and sinister practices which were in their nature destructive."

The motion continues by stating that as a matter of fact the particular code was in line with present day trend in legislation. For instance, the Robinson-Patman Act prohibits manufacturers from discriminating in price. Texas state laws likewise prohibit price discriminations. Thus, under rule 17 of

[*Continued on page 59*]

Proration Matters

Kansas operators want change in proration rules, but can't agree on potential method. Texas adopts a "chisel-proof" report.

CHANGES in proration rules for Kansas were indicated bv testimony that went before the State Corporation Commission prior to its adjournment for the week-end of an open hearing Producers were not in accord as to desirable new rules, but agreed that changes were needed. An undercurrent of the hearing was that existing rules are not being rigidly followed and that they permit inequalities even with regulations.

Suggest Decline Curve

Thursday and Friday were devoted to introduction of evidence in support of a plan, whereby all Kansas wells under proration would be forced to have potential output measured by a composite decline curve. This curve was worked out by a committee, which made a study of well histories to determine the relationship between initial output and ultimate recovery. Other phases of this plan, favored by the majority of a committee of producers, would establish minimum well output in relation to well depths. Members of the Corporation Commission, however, expressed doubt as to the legality of restriction by well depths.

The primary purpose of the decline curve method of determining potentials is to get away from taking physical tests. A mass of testimony and evidence was introduced to show that water encroachment is speeded in these tests. Proponents of the decline curve conducted a laboratory test to show the effect of water coming in a sand when oil is removed rapidly. Well records were introduced to show that water percentage had increased in the Silica pool, Rice County, when potentials were taken. Present Kansas regulations require potential taking each four months. Special equipment is used for these tests. In reality potentials are being taken more frequently for some fields, while in others potentials are being neglected.

Only by cross examination did opponents of the decline curve method get opportunity to present their views last week. Their foremost thrust against the method was that only by a physical test can the capacity of a well be determined. On that basis next week they will present their plan, which will be that physical potentials tests be taken each six months. Instead of special equipment for the tests, however, it would require that restriction be placed on pumping, which would be through tubing not larger than three-inch, 54-inch stroke of three-inch working barrel and with swabbing not allowed. Their proposal would allow a retest 60 days after the first potential. After that only the regular tests each six months would be permitted.

One proposal by those in favor of the decline curve is that all Kansas pools with well averages of 50 barrels or less be given 30 days potential tests for the ultimate purpose of determining whether or not any or all these pools be removed from proration restrictions.

The hearing was the first meeting of the corporation commission in regard to oil since E. G. Dahlgren became director of proration.

Texas Chiseling

New reporting forms designed to cut out "chiseling" on allowables have been instituted by the production division of the Texas Railroad Commission.

Heretofore it has been a common practice for operators to report dead wells as producers, then make the allowable from the other wells on a lease.

[*Continued on page 66*]

Legislative Actions

Pennsylvania probers told operations in state unprofitable . . . Proposed depletion allowance change decried at Pennsylvania meeting.

ALTHOUGH increased demand makes it barely possible to supply demand, both refining and producing operations in Pennsylvania are financially unprofitable. The Pennsylvania legislative commission investigating the oil and natural gas industry to determine whether its revenue is out of proportion and therefore it should be placed under state regulation, was presented with this picture by producers and refiners at hearings held in Oil City and Franklin during the week.

Brundred Tells of Field Problems

A detailed picture of producing problems in the Pennsylvania grade fields was presented by W. J. Brundred, president of the Brundred Oil Corporation, Oil City, at the Franklin hearing. He said that in Venango County alone there are approximately 24,000 wells with an average production of 38.4 barrels per year, or slightly more than one-tenth of a barrel per day. Average production costs in the region, he said, were $4 in 1927, $3.53 in 1928 and $3.84 in 1929—a three-year average of $3.79 per barrel.

Repressuring methods used by his company have reduced costs to a point below the average, Mr. Brundred said, and enabled the Brundred Oil Corporation to produce oil at an average cost of $2.42 per barrel last year, during which year the average price for crude was at the same figure. On questioning by commission members, he declared the Pennsylvania grade crude region included approximately 140,000 wells, which are operated by approximately 18,000 producers. A recent survey revealed that there are approximately 2,220,000,000 barrels of crude oil remaining in Pennsylvania sandstones, he answered to a question on whether there were indications of approaching exhaustion.

"Public Is Not Paying Enough"

The Pennsylvania operator must find a way of producing at less cost or must obtain a higher price for his crude, C. C. Hogg, manager of National Petroleum Company, Titusville, testified. "I do not feel that the public is paying enough for Pennsylvania quality," he said. Hogg expressed the opinion that the small producer should not be forced out of business and declared that cooperation, rather than competition, existed among operators in Pennsylvania grade fields.

John Glass, Oil City, pointed to the $6.10 paid for Pennsylvania grade crude in 1929 and the present price of $2.82 as indication that appreciation of crude oil prices has not matched that of other commodities. Taxation was the big problem of the industry, he said.

John Ritchie, Franklin, Pennsylvania, declaring he found production costs slightly over $3 per barrel, said only hope of a higher price has sustained producers over the past few years. Since entering the producing business in 1935, he has drilled 14 wells, including two repressuring wells, on his property at a cost of $19,719.67, or an average cost of $1,408.55 per well, exclusive of pumping power and compressor which added $3,532.06 to the cost of the lot, he said.

Pennsylvania Gasoline Unprofitable

At the Oil City hearing, Fayette B. Dow, vice president and general counsel of the Pennsylvania Grade Crude Oil Association, declared that gasoline made from other crudes than Pennsylvania constituted approximately 60 percent of the motor fuel marketed in the Appalachian area and governed the price at which gasoline made from Pennsylvania crude was sold. He said that increasing transportation costs in recent years made it unprofitable to market gasoline made from Pennsylvana crude outside of the district in which it is refined.

W. S. Zehrung, president of The Pennzoil Company, was questioned at length regarding "posted" prices of crude. He said that there is no fixed price, but that the major buyers, which include South Penn Oil Company, Tide Water Pipe Line Company, Cities Service Oil Company and Valvoline, post their prices and others follow. Demand was the biggest factor in determining the crude price, he said.

Denies Jersey Influence

W. R. Birkmayr, manager of the gasoline division of The Pennzoil Company, denied that Standard Oil Company of New Jersey prices were employed as a basis and said that the 150 stations operated by the company have followed the lead of Gulf Oil Corporation, Sun Oil Company, Standard of

[*Continued on page 66*]

Labor Situation

CIO wants Standard of California election. Strike violence creates opposing sentiment.

SEVERAL more chapters have been written since a week ago in the story of the labor unrest of 1937, and in these chapters are some paragraphs affecting the oil industry.

While the story has been so far largely the account of the rise of John L. Lewis to a pinnacle of power, the past few weeks have given indication that the story henceforth may deal with a decline from that peak.

Public sentiment, as reflected in the newspapers, in Congress, and elsewhere, apparently has become impatient and adversely critical regarding some of the activities of the labor unions, particularly the C.I.O.; whereas the unionization movement of the Lewis group undoubtedly had strong sympathy from the public originally.

The apparent swing of public opinion from approval of the C.I.O. campaign to disapproval has come, perhaps significantly, along with increased violence in connection with strikes. Of such violence, the public has become rather generally informed, through news reels as well as by radio and type.

Law Makers Aroused

Such change of attitude by the public apparently is responsible for the fact Congressional leaders finally are taking serious cognizance of the labor situation. They not only are contemplating amendment of the Wagner labor relations act to eliminate some of the objectionable situations now existing, but also are urging the President of the United States to issue an official statement aimed at settling the labor disturbance, embodying an assertion that in the public interest the government will not tolerate violence or unlawful measures on the part of either labor organizers or industrial leaders.

Republican Senator Vandenberg of Michigan, although identified with the minority political party, perhaps has sensed a new public sentiment that might rally behind him in proposing amendments to the Wagner Act. He declares that there are four groups importantly interested in a collective bargaining dispute: the majority employes, the minority employes, the employer, and last but not least, the public. He says the present law ably defends the majority employes, and that his proposed amendments are needed to protect the interests of the other three groups.

C. I. O. Seeks Election

Encouraged by the moderate success it has had so far outside of the "Standard Oil" group, and still hopeful of getting to first base within that group, the C. I. O. last week decided to go to bat at the El Segundo refinery of Standard Oil Company of California, at Los Angeles. The C. I. O.'s oil industry organization, now called the Oil Workers' International Union, petitioned the

[*Continued on page 66*]

Scout Meeting

National Oil Scouts Association petitions American Petroleum Institute membership . . . H. L. Boyd elected president . . .

THE fourteenth annual meeting of the National Oil Scouts Association of America came to a close June 26, after two days of technical and business sessions that drew more oil scouts than any previous convention.

Recognition of the National Oil Scouts of America by the American Petroleum Institute was the main topic of discussion during the latter part of the convention. Whether the association will become a division of the American Petroleum Institute is a question yet to be settled. This step for recognition was formulated at the convention after W. R. Boyd, Jr., American Petroleum Institute executive vice president, made the principal address. A resolution was passed during the meeting on June 26 whereby a committee was to be appointed to meet with officials of the American Petroleum Institute and discuss the possibilities of becoming part of the Institute.

The scouts have made much progress in building their association in the past several years. Scouts from the Mid-Continent joined forces with the national chapter in 1936. Scouts in the west, middle west, and east are considering taking an active part in the association. If these join forces with the association it will be one of the largest organizations in the oil industry.

H. L. BOYD
President

Boyd Elected President

Election of officers the afternoon of June 26 resulted in the following selections: H. L. Boyd, Magnolia Petroleum Company, Dallas, president; H. Leyendecker, Tide Water Associated Oil Company, Houston, first vice president; E. R. Neath, Humble Pipe Line Company, Longview, second vice president; L. D. Huddleston, Shell Petroleum Corporation, Wichita Falls, secretary and treasurer; Lee A. Adams, Sinclair-Prairie Oil Company, Oklahoma City, chairman of the executive committee. He will be in charge of the scout's new yearbook for 1937.

The retiring officers were: Claude Strahan, Atlantic Refining Company, Shreveport, president; Maurice Miesser, Phillips Petroleum Company, Shawnee, Oklahoma, first vice president; Paul A. Barenkamp, Sun Oil Company, Tyler, second vice president; H. Leyendecker, Tide Water Associated Oil Company, Houston, chairman of executive committee; Howard L. Boyd, Magnolia Petroleum Company, Dallas, secretary and treasurer.

Tulsa will probably be the next convention city of the National Oil Scouts Association of America, Incorporated.

An informal dinner dance and the awarding of golf trophies by president Strahan closed the 1937 meeting of the National Oil Scouts Association of America. The general arrangements committee included the following: Howard Boyd, chairman; E. L. Wilson; Ben F. Jones; Edward C. Harman; John H. Langston, and C. M. Linehan. There were over 55 oil companies, independent operators, supply companies, and geophysical companies that made the convention possible through cooperation and financial support.

All photographs by
Ole Masters Studio, Dallas

H. LEYENDECKER
First Vice President

LEE A. ADAMS
Executive Committee Chairman

E. R. NEATH
Second Vice President

L. D. HUDDLESTON
Secretary-Treasurer

Taxation

Pipe lines delay protest of Texas intangible taxes

OIL pipe line company executives are awaiting further word from the State Tax Board before determining whether 1937 assessments of their intangibles will be carried to the courts. Meanwhile, it appears that the anticipated Texas Legislature tax session will not be before fall.

That the Tax Board has no intention of materially reducing the preliminary assessments was clearly indicated here this week as hearings on those assessments were concluded. Tax Commissioner Albert K. Daniel, who as a legislator wrote the intangible tax law, openly invited Humble Pipe Line Company to "do as you have always done and go to the courts" if not satisfied with the Board's action.

Humble's protest, as voiced by Attorney A. J. Wirtz of Austin, was due to the fact that Daniel refused to allow Tax Board auditors to testify concerning figures used by the auditors in arriving at the intangible valuation. The

witnesses were allowed to tell the general steps in the formula by which an intangible valuation of $17,000,000 was set but they could not tell any figures that were used.

The Humble hearing came nearest to providing a conflict between attorneys and the board as Wirtz and his associates insisted that they could not present an intelligent case without knowing the basis for the tax board's preliminary assessment. The formula used, as described by the Board's auditor Batsell, was approximately as follows:

The physical value of the pipe line properties was determined by taking the values at which the properties were rendered for ad valorem tax purposes in the various counties and raising these values to a full 100 percent. The ratio or percentage used in making this estimation of the rendition to 100 percent was not disclosed. However, it was believed to be upon a basis of 50 percent.

The company was then allowed 8 percent on the physical value, and this 8 percent figure—whatever it was—was deducted from the Board's estimate of the company's net profit as reported by the company itself with certain "adjustments." The remainder represented excess profits and are in other words profits upon intangibles, and was capitalized 13 percent to get the total intangible valuation. This gave a figure of around $34,000,000, 50 percent of which gave the figure of $17,000,000 to be certified to the counties.

Sharply in contrast to the clash in which Humble engaged was Magnolia Pipe Line's hearing. Magnolia and the Board appeared to be in substantial agreement as to the formula to be used in arriving at an intangible. There was, however, a marked variation in the conclusions due to the use of different figures.

The chief point of agreement was upon the question of the average rendition of property for tax purposes over the State. Magnolia representatives testified that the average was 44 percent. The Board has contended that the average is from 40 to 50 percent. All others have asserted the average to be 25 to 33 1/3 percent. And in view of the fact that the Board has been following the method of increasing the rendition to a full 100 percent to get the physical value, this average has become the most important point in the hearings. If Magnolia properties are rendered at 44 percent of their true values, their renditions are higher than any other company which has placed witnesses before the Tax Board.

Tax Session in September

The tax session of the Texas Legislature will come early in September according to the latest pronouncement on this subject by Governor James V. Allred.

The Governor has heretofore said that the tax session "probably will be in September" but this week he declared "late in September" would not be early enough. The principal reason is that more than one session very likely will be required. Moreover, taxes is not the only subject he plans to submit to the Legislature in special session.

EDITORIAL COMMENT

The Public and the CIO

EVERY day there is more and more evidence that the public is getting fed up with the C I O and the lawlessness with which we associate its name.

Better acquaintance with what the C I O adherents are doing, plus the continued lawlessness for which it has had the credit are responsible for the growing feeling on the part of the public that such tactics as have been followed by C I O demand more than passive submission.

Due in part probably to the semi-sponsorship given the Lewis organization by Francis Perkins, who holds the title of Secretary of Labor in President Roosevelt's cabinet, in the early days of its lawlessness, the C I O flourished with a fine disregard for law or court decisions until it looked as though the alliance between administration and Lewis was too firmly fixed to be broken without some sort of a public uprising.

Now the public is rising—through expressions of public opinion the political leaders have realized that the public is aware of the danger in which it stands. The public press is now filled with denunciations of the communistic tenets and associations of the C I O movement. And more and more apparent it has become that even the man who let the genii out of the bottle, Lewis himself, cannot control the lawless elements set in motion.

The President himself has made one utterance which shows that what Lewis has started is plagueing him. True, he aimed his statement at "the extremists on both sides," but the public will not be satisfied with a definition of "extremist" which means that anyone who will not sign up with the C I O is an extremist.

The right to work, as pointed out in these columns week before last, is as sacred a right as a human being can have. Rocks, rifles, baseball bats and revolvers, wielded by those who would keep a man from a job he wants to fill, dynamite which throws thousands of would-be workers out of work, are nothing short of revolution against constituted authority. Now we begin to hear fears expressed that retaliation against such tactics as the C I O has employed will take the form of bloodshed.

Such bloodshed should not be permitted—but it should not be forgotten that the American public must be protected against the causes which have naturally led it to defend itself.

No man has the right to make it difficult for a man to take a job. Threats of force, dynamiting, destruction or occupation of property should be dealt with firmly and quickly. Otherwise, this land which means so much to its citizenry will go the way of Russia, where an organized minority, under the thin guise of liberty— a guise now worn completely threadbare, rules with an iron hand and actual liberty is a thing to be dreamed of in the deep silence of night.

Profits Following 1929 Pattern

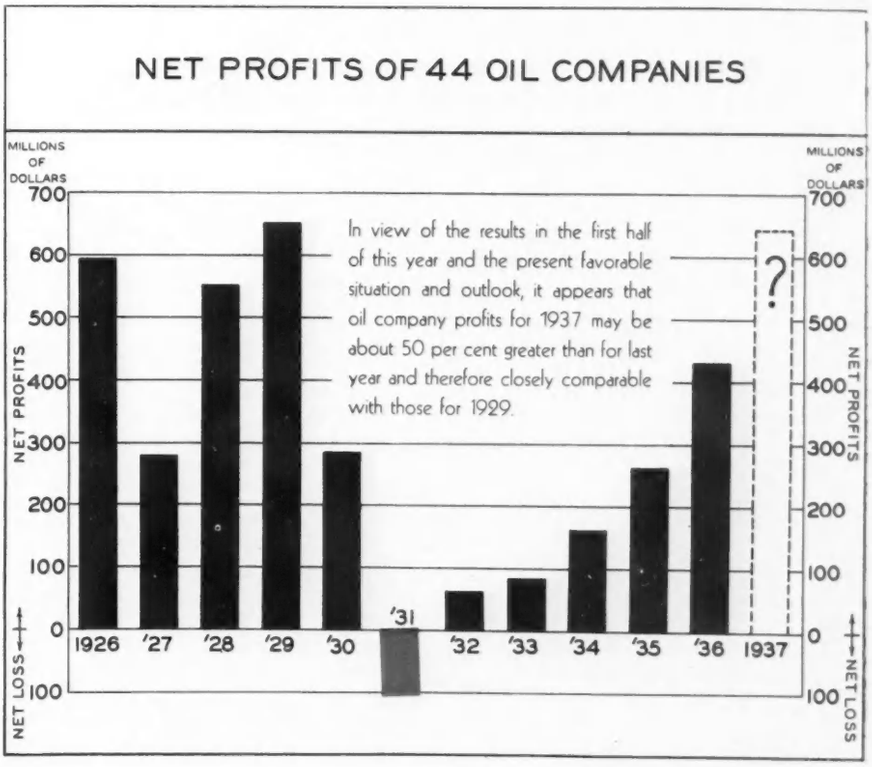
By L. J. LOGAN, Associate Editor

Results in first six months and current outlook indicate that earnings for 1937 may be 50 percent higher than for 1936 . . . such an increase would push profits back to the summit reached in 1929.

ALTHOUGH it seemed possible a few years ago that oil companies might never again prosper as much as in 1929, it now appears that 1937 may bring a virtual duplication of the earnings of that bountiful year, when the prosperity of the late 1920's reached its culmination.

This possibility that 1937 may prove another 1929 from the standpoint of oil company earnings is indicated by several factors: (1) the results obtained in the first half of this year, (2) the continuing favorable situation and outlook, and (3) the hitherto uninterrupted upward trend of earnings for the past several years.

These circumstances all indicate that oil company profits for 1937 may be about 50 percent greater than for last year and therefore closely comparable with those for 1929.



At 1929 Levels Lately

In the first half of this year, the net earnings of oil companies apparently were at least 50 percent larger than in the similar period of last year, and around the levels of 1929.

Especially good results are in prospect for the third quarter of this year, moreover, with prices continuing favorable and volumes of business running at unprecedented levels.

The outlook for the final quarter is more conjectural, but so far there is not indicated any radical change from the current favorable trends.

Profits Up Each Year

A recovery of oil company earnings this year to the 1929 proportions is strongly suggested by charting the upward trend of the profits for the past several years.

The oil industry now is in the sixth year of recovery from the generally unprofitable operations of 1931; and in this six-year comeback, the industry has not once faltered, each year having brought an improvement of around 50 percent or more over the earnings of the preceding year.

In the first half of this year, there was a continuation of that sharply rising trend of earning power, the profits of oil companies

TABLE 1

Profits of Oil Companies for 1936 Compared with Those in Earlier Years

Net profits, after all deductions, including interest, depreciation, depletion, amortization, federal taxes, minority interest, etc.

YEAR	44 Companies Those in Table 2	49 Companies Those in Tables 2 and 3	54 Companies Those in Tables 2, 3 and 4	57 Companies Those in Tables 2, 3 4, and 5	61 Companies Those in Tables 2, 3, 4 5, and 6
1926	$596,307,186	.....	.....	.....	.....
1927	280,177,822	.....	.....	.....	.....
1928	572,425,901	.....	.....	.....	.....
1929	657,784,847	.....	.....	.....	.....
1930	287,535,440	.....	.....	.....	.....
1931	*103,355,825	$*103,622,304	.....	.....	.....
1932	63,731,111	64,689,582	.....	.....	.....
1933	81,701,726	82,331,788	$ 86,041,099	.....	.....
1934	161,886,371	163,197,998	168,110,129	$164,258,794	.....
1935	262,052,773	263,666,467	270,974,327	270,185,936	$270,572,876
1936	430,181,308	431,821,723	448,245,966	448,331,166	449,119,222

*Loss.

having been probably more than 50 percent larger than in the similar period last year.

At present, no radical change in the trend is indicated.

Projection of the trend on to the end of the year would bring the earnings for 1937 to about the same level as for 1929.

Headed Toward 1929 Record

For the oil industry to recover this year the earning power of 1929, it would have to show for 1937 a little over 50 percent higher earnings than for 1936.

This is indicated in an accompanying table showing the annual net profits of 44 oil companies and their predecessor companies back through 1926.

Those companies reported for 1936 an aggregate net profit of $430,181,308. If the 1937 profits should prove 50 percent larger, as now seems quite possible, they would amount to about $645,000,000, or nearly the same as the $657,784,847 reported for 1929.

Profits at Peak in 1929

For these 44 companies, the 1929 record is the best in the whole period from 1926 to 1936, inclusive, the 1929 earnings having been better than for the also exceptionally good years, 1926 and 1928. As compared with the $657,784,847 combined net profit for 1929, the 44 companies reported profit of $596,307,186 for 1926, second best year of the 11-year period, due to high oil prices and profit of $572,425,901 for 1928. For 1927 there was a temporary slump in profits to $280,177,822.

Immediately after 1929, the 44 companies had one more good

TABLE 2

Annual Net Profits of 44 Oil Companies and Their Predecessors in Past 11 Years

After all deductions, including interest, depreciation, depletion, amortization, federal taxes, minority interest, etc.

YEAR	Amerada Corporation	American Republics Corporation	Atlantic Refining Company	[F]The Barber Company, Inc. (Was General Asphalt Co.)	[A]BARNSDALL COMPANIES			Bishop Oil Corporation	[B]CONSOLIDATED OIL CORPORATION AND PREDECESSORS			
					Barnsdall Corporation	Barnsdall Oil Company	Barnsdall Refining Company		Consolidated Oil Corporation & Subsidiaries	Prairie Oil & Gas Company	Prairie Pipe Line Company	Sinclair Consolidated Oil Corporation
1926	$4,933,083	$2,899,622	$7,021,334	$2,001,992	$6,007,485	.....	.....	$3,545	.....	$15,827,479	$14,446,787	$17,648,032
1927	3,706,715	*146,197	2,315,715	1,329,174	4,229,796	.....	.....	*81,097	.....	2,356,061	18,327,711	5,391,081
1928	2,214,109	105,590	16,848,807	920,507	4,039,861	.....	.....	3,933	.....	10,541,597	19,786,612	13,447,347
1929	2,758,900	660,572	17,332,417	1,757,095	7,205,161	.....	.....	510,385	.....	14,331,643	22,800,453	16,599,037
1930	3,961,476	*927,675	2,742,688	1,006,795	5,130,890	.....	.....	49,304	.....	2,216,084	14,637,625	12,026,424
1931	*1,701,648	*4,156,308	513,750	*20,065	*3,268,637	.....	.....	*128,161	.....	U	T*547,313	P*22,010,173
1932	1,147,207	S	3,918,021	*621,268	*847,072	.....	.....	8,092	Q1,601,039	.....	.....	.....
1933	380,443	S	6,556,377	*218,746	*1,942,635	.....	.....	75,071	133,580	.....	.....	.....
1934	1,736,420	*2,492	5,512,105	*296,588	*1,029,447	.....	.....	149,857	553,282	.....	.....	.....
1935	1,797,613	30,540	3,970,598	153,435	A741,136	.....	A*484,484	141,962	11,306,904	.....	.....	.....
1936	1,983,901	368,741	7,342,197	444,545	A	A2,262,544	*718,267	178,019	16,728,930	.....	.....	.....
Total for period	$22,918,219	*$1,167,607	$74,074,009	$6,456,876	$20,266,538	$2,262,544	*$1,202,751	$910,910	$30,323,735	$45,272,864	$89,451,875	$43,101,748

Net Profits of Oil Companies, By Years—Continued

YEAR	[C]CONTINENTAL-MARLAND COMPANIES			Darby Petroleum Corporation	Gulf Oil Corporation	Houston Oil Company & Houston Pipe Line Company	Lion Oil Refining Company	Lone Star Gas Corporation	Louisiana Land & Exploration Company	Mid-Continent Petroleum Corporation & Subsidiaries	Margay Oil Corporation	Navarro Oil Company
	Continental Oil Company (Delaware)	Continental Oil Company (Maine)	Marland Oil Company									
1926	.....	$5,029,659	$11,690,811	$392,029	$35,098,077	$2,226,801	$1,181,278	$3,655,662	G	$8,615,711	$345,501	$63,927
1927	.....	*135,129	*7,691,076	415,585	13,707,627	2,429,331	450,975	3,829,901	G	D3,298,575	765,782	*260,346
1928	.....	3,347,691	*4,987,564	803,558	36,325,140	1,812,517	206,411	4,824,804	*835,683	3,897,056	148,799	*272,461
1929	$C9,028,660	C1,058,420	C	1,155,582	44,489,685	1,731,469	1,184,478	6,540,581	*679,066	7,683,378	206,765	*12,767
1930	255,598	.....	.....	362,198	10,625,252	1,655,336	*647,108	6,428,936	*49,732	1,493,056	*141,833	*53,497
1931	*10,683,313	.....	.....	*993,368	*23,670,052	*356,484	*728,879	4,885,124	*1,660	*4,962,411	*227,911	35,423
1932	*1,444,133	.....	.....	146,109	2,743,492	*901,648	*385,098	4,660,932	190,725	*2,081,900	*44,584	31,921
1933	2,275,860	.....	.....	*379,672	*11,386,387	*487,178	*221,543	3,782,027	157,381	*1,766,438	*59,838	167,950
1934	4,865,358	.....	.....	246,840	2,811,183	281,146	12,652	4,253,430	460,693	828,093	85,906	216,778
1935	8,813,561	.....	.....	459,475	10,551,720	837,639	*53,455	5,188,473	973,135	2,417,176	93,578	*270,798
1936	9,612,597	.....	.....	444,140	26,356,003	500,441	594,735	6,192,631	1,901,298	4,777,578	177,588	291,090
Total for period	$22,724,188	$9,300,641	*$987,829	$3,052,476	$147,651,740	$9,729,370	$1,594,446	$54,242,501	$2,117,091	$24,199,874	$1,349,753	*$62,780

Net Profits of Oil Companies, By Years—Continued

YEAR	The Ohio Oil Company & Subsidiaries	Panhandle Panducing & Refining Company	[E]PHILLIPS-INDEPENDENT COMPANIES		[B]Pierce Petroleum Corporation	Plymouth Oil Company	Pure Oil Company	Richfield Oil Company of California	[M]Seaboard Oil Company of Delaware & Subsidiaries	Shell Union Oil Corporation & Subsidiaries	Simms Petroleum Company	Skelly Oil Company
			Phillips Petroleum Company	Independent Oil & Gas Company								
1926	$13,536,904	$325,154	$21,407,708	$2,975,044	*$86,275	$6,673,419	J$10,731,572	$2,644,392	N*$2,134,642	$31,518,965	$1,491,398	$5,691,346
1927	3,510,373	*22,287	4,937,931	2,313,431	10,657	2,491,987	J4,710,585	3,742,884	N*2,232,246	11,344,914	*61,369	1,438,228
1928	5,054,956	84,280	5,960,171	5,092,858	1,052,894	2,077,862	J11,224,081	7,818,076	*1,332,906	20,395,021	334,064	4,104,376
1929	12,347,649	151,619	13,212,591	5,882,179	1,067,402	2,241,392	J6,539,521	8,554,494	*28,850	17,573,249	2,328,802	5,786,490
1930	10,930,015	*449,401	3,040,630	.....	*461,123	2,187,907	J2,617,748	U	605,873	*5,095,574	*1,475,518	1,916,871
1931	*21,488,763	*515,644	*5,576,409	.....	264,167	825,013	J470,178	OK*4,644,925	123,711	*27,008,310	*2,651,222	*2,117,110
1932	7,242,981	*353,948	775,766	.....	*52,641	1,667,008	642,386	O*2,998,820	858,172	660,076	*473,549	*674,507
1933	*130,016	*234,663	1,500,695	.....	*91,537	47,598	811,086	O*2,892,172	1,275,565	*4,240,965	*17,007	*820,534
1934	5,411,924	*194,878	5,757,309	.....	227,658	670,261	*884,872	O*1,631,292	1,375,590	*949,111	161,171	713,577
1935	5,488,268	*26,009	13,421,703	.....	124,355	736,057	8,150,027	O*2,160,770	1,670,847	6,812,835	*2,498	2,585,849
1936	7,881,571	154,405	17,875,489	.....	*679,758	1,739,682	7,658,372	O615,568	2,485,676	22,494,364	*29,383	4,850,315
Total for period	$49,785,862	*$1,081,372	$82,313,584	$16,263,512	$1,375,799	$21,358,186	$52,670,684	$9,047,435	$2,666,790	$73,505,464	*$395,111	$23,474,901

Footnotes on next page.

year, reporting for 1930 a combined profit of $287,535,440, or a little more than for 1927.

Losses Common in 1931

But troubles and depressed oil prices came with the early development of the big East Texas field and the growing severity of the depression in 1931, and for the year the 44 companies showed in the aggregate a net loss of $103,355,825.

The bottom of the depression was reached in 1932, and oil demand was comparatively low; but the East Texas situation had cleared up some, and oil prices showed some improvement, enabling the 44 companies to get back, in the aggregate, on a profitable basis, with combined net earnings of $63,731,111.

On Recovery Road

For 1933 as a whole, prices were not as good as in 1932, although sharp improvement occurred in the latter part of the year. However, demand for oils was revived greatly in 1933, and the increased volumes of business stimulated profits, causing for the 44 companies an increase of earnings to $81,701,726.

In 1934 oil prices and volumes of business improved further, and the 44 companies reported profit of $161,886,371.

A further important increase in oil consumption occurred in 1935, while prices held about unchanged at the levels of 1934, resulting in aggregate net profit of $262,052,773 for the 44 companies in 1935.

In 1936 prices as well as busi-

TABLE 2

Net Profits of Oil Companies, By Years—Continued

YEAR	[L]SOCONY-VACUUM COMPANY AND PREDECESSORS			South Penn Oil Company	Standard Oil Company of California	Standard Oil Company of Indiana	[I]Standard Oil Company of Kansas	Standard Oil Company of Kentucky	Standard Oil Company (New Jersey) & Affiliated Companies (Consolidated Income)
	Socony-Vacuum Oil Company, Incorporated	Standard Oil Company of New York	Vacuum Oil Company						
1926	.....	$32,776,502	$24,133,655	$3,152,916	$55,122,014	$55,098,764	$163,203	$7,309,568	$117,652,201
1927	.....	11,414,887	25,559,899	1,727,774	40,210,952	30,132,456	*827,757	4,492,008	40,422,857
1928	.....	39,645,228	37,659,458	3,911,165	46,083,817	[H]77,337,166	292,228	4,745,604	108,485,686
1929	.....	38,750,849	35,767,627	5,139,296	46,633,490	[H]78,499,754	1,512,912	6,652,992	120,912,794
1930	.....	16,496,727	20,393,488	1,378,072	37,675,300	46,371,437	380,148	5,253,182	42,150,663
1931	*$4,169,248	.....	.....	*820,192	14,559,593	17,596,396	*618,616	3,332,183	8,704,758
1932	5,320,282	.....	.....	945,761	14,014,992	16,558,281	69,971	2,593,981	282,865
1933	22,545,462	.....	.....	512,913	7,560,902	17,674,351	77,790	2,458,045	25,084,310
1934	24,121,297	.....	.....	1,954,919	18,327,807	18,949,680	366,780	2,599,466	45,618,960
1935	22,525,892	.....	.....	2,321,357	18,594,330	30,179,895	131,748	2,197,809	62,863,192
1936	42,909,363	.....	.....	3,589,807	23,310,224	46,883,448	257,081	3,793,451	97,774,583
Total for period	$113,253,048	$139,084,193	$143,514,127	$23,813,788	$322,093,421	$435,281,628	$1,805,488	$45,428,289	$669,952,869

Net Profits of Oil Companies, By Years—Continued

YEAR	Standard Oil Company of Ohio	Sun Oil Company	Superior Oil Corporation	The Texas Corporation & Subsidiaries	Texas Pacific Coal & Oil Company	Tide Water Associated Oil Company	Union Oil Company of California	H. F. Wilcox Oil & Gas Company	Total Net Profits of 44 Companies
1926	$3,207,429	$3,358,900	$75,850	$36,043,330	$1,578,043	$9,885,908	$11,831,618	$1,053,485	$596,307,186
1927	2,335,042	2,791,057	*545,058	20,029,405	314,088	5,345,872	10,048,493	[D]300,575	280,177,822
1928	3,896,549	5,008,027	*662,152	45,073,879	201,793	14,132,542	11,101,935	[D]468,612	572,425,901
1929	4,202,384	8,242,492	826,261	48,318,072	787,286	14,000,688	15,019,636	[D]518,928	657,784,847
1930	3,724,325	7,745,484	*1,684,369	15,073,303	*970,272	8,750,914	9,604,997	602,796	287,535,440
1931	2,359,173	3,107,147	*1,864,364	*9,954,478	*1,413,236	*5,818,671	3,054,913	*1,069,783	*103,355,825
1932	*1,206,361	4,198,046	9,436	*2,161,841	160,227	4,718,694	3,211,084	*399,066	63,731,111
1933	*823,357	6,971,844	*327,344	*491,003	*556,583	7,265,301	1,954,279	*479,486	81,701,726
1934	*1,913,735	6,650,464	274,019	5,545,205	*248,270	5,810,657	2,902,733	*416,164	161,886,371
1935	2,690,647	7,100,238	244,624	17,065,037	23,640	7,865,701	5,038,286	*258,495	262,052,773
1936	4,194,314	7,563,554	147,895	38,260,341	642,330	10,217,928	6,133,398	18,579	430,181,308
Total for period	$22,666,410	$62,737,253	*$3,505,202	$212,801,250	$519,046	$82,175,534	$79,901,372	$339,981	$3,290,428,660

* Loss.

[A] Barnsdall Corporation's refining and marketing properties segregated from producing properties, May 31, 1935: Barnsdall Corporation becoming strictly a producing concern; and Barnsdall Refining Corporation being formed to take over the refining and marketing; Barnsdall Corporation then was merged with Barnsdall Oil Company and its name was changed to Barnsdall Oil Company effective March 31, 1936. Barnsdall Refining Corporation for final seven months of 1935 showed net loss of $484,484.

[B] Sinclair Consolidated Oil Corporation, effective March 31, 1932, purchased the business, properties and other assets of the Prairie Pipe Line Company and the Prairie Oil & Gas Company. The name of the Sinclair Consolidated Oil Corporation on same date was changed to Consolidated Oil Corporation. From that date, the consolidated accounts reflect operations of the three combined companies and their subsidiaries.

[C] Continental Oil Company (Delaware) was formed through consolidation, as of July 1, 1929, of Continental Oil Company (Maine) and Marland Oil Company; earnings shown for Continental Oil Company (Maine) for 1929 cover only first six months, and those shown for Continental Oil Company (Delaware) for 1929 embrace operations of the Continental (Maine) properties in latter half of year as well as the Marland properties for whole year.

[D] Before federal taxes.

[E] Phillips Petroleum Company in late 1930 acquired Independent Oil & Gas Company.

[F] Name of The Barber Company was General Asphalt Company prior to October, 1936.

[G] Organized in 1926 as Border Research Corporation; name was changed in 1927.

[H] Standard of Indiana figures include $3,118,065 extra dividends from Midwest Refining Company in 1929, and $21,821,870 in 1928.

[I] Standard Oil Company of Kansas was largely a refining company in 1931 and previously, but in 1932 and subsequent years the company has concentrated its business chiefly in the producing division of the industry.

[J] Fiscal year including final 9 months of indicated calendar year and first 3 months of succeeding year; thus profit of $470,178 shown for 1931 actually represents results for fiscal year ended March 31, 1932, etc. First annual report conforming with calendar was that for 1932.

[K] From January 15, to December 31, 1931.

[L] Standard Oil Company of New York and Vacuum Oil Company were merged in 1931 into Socony-Vacuum Oil Company.

[M] Seaboard Oil Company's name was Mexican Seaboard Oil Company prior to May, 1931.

[N] Before depletion and depreciation.

[O] Company in receivership from January 15, 1931, and, interest on Richfield funded debt not deducted thereafter; Pan American Petroleum Company (wholly-owned) also in receivership after March 5, 1932, and interest on its funded debt also not deducted after that date.

[P] Thirteen months ended January 31, 1932.

[Q] Eleven months ended December 31, 1932.

[R] Pierce Petroleum Corporation on June 30, 1930, sold all its properties to Sinclair Consolidated Oil Corporation in return for 645,834 shares of common stock of that Company, which later became Consolidated Oil Corporation.

[S] In receivership March 16, 1932, to March 26, 1934. No reports published during receivership period.

[T] Eleven months ended November 30, 1931.

[U] No statement issued for year, and results of operations not available.

TABLE 3

Annual Net Profits of 5 Oil Companies in Recent Years

After all deductions, including interest, depreciation, depletion, amortization, federal taxes, minority interest, etc.

YEAR	Profits in Past 8 Years: Derby Oil & Refining Corporation	Profits in Past 8 Years: Pacific Western Oil Corporation	Profits in Past 7 Years: [A]Pierce Oil Corporation	Profits in Past 6 Years: Consolidated Royalty Oil Corporation	Profits in Past 6 Years: Texas Gulf Producing Company	Total of 5 Companies of Table 3
1929	$335,362	$1,816,985	.....	.....	[B]	.....
1930	671,975	2,316,544	$110,548	.....		.....
1931	45,280	*903,124	112,965	[C]$107,779	$370,621	*$266,479
1932	50,392	*181,803	7,669	[C]153,659	928,554	958,471
1933	125,194	*13,209	9,381	49,638	459,058	630,062
1934	*102,398	631,833	*99,392	80,611	800,973	1,311,627
1935	67,036	663,533	3,259	81,685	798,181	1,613,694
1936	248,874	1,582,326	*1,108,085	93,890	823,410	1,640,415

* Loss.

[A] Pierce Oil Corporation on May 7, 1924, sold all its properties to Pierce Petroleum Corporation and in return received 1,103,419½ shares of Pierce Petroleum Corporation Common Stock.

[B] Company was not organized until later.

[C] After interest and expenses, but before depreciation, depletion, etc.

ness volumes showed further improvement, and the combined profits of the 44 companies rose to $430,181,308, showing an increase of 64 percent over the 1935 profits.

Further Gains in 1937

At the beginning of 1937, crude oil prices were advanced further about 10 percent, and refined oil prices were increased proportionately; and so far this year the demand for petroleum, at all time record levels, has been running over 10 percent higher than last year.

These gains in prices and business volumes explain why earnings in the first half of 1937 ran probably more than 50 percent above those in 1936. Similarly, the prospect that these gains in prices and business volumes will be maintained also for the latter half of the year constitutes a basis for assuming that earnings, too, are likely to continue well above last year.

Favorable Conditions Continue

The continued high consumption of oil seems assured, in view of the present all time record number of automobiles registered in the United States, and in view of indications that this summer and fall will bring the most motoring this country ever has had.

The continued maintenance of favorable prices is promised because of the low levels to which oil inventories have been reduced in recent years, and because of the success that is being achieved in balancing the new supplies of oil with the existing demand.

Prices and Demand Affect Profits

As indicated above, the profits of oil companies back through 1926 have varied roughly in accordance with the prices received for oil and the volumes of business handled. In tabular form, this relation between earnings, proces, and business volumes has been as follows:

Relation Between Business Volumes, Oil Prices and Profits of A Group of Oil Companies

Year	Total Demand for U. S. Oils (Barrels)	Average Price of Crude per Barrel	Net Profits of 44 Oil Companies
1926	913,030,000	$1.88	$596,307,186
1927	943,992,000	1.30	280,177,822
1928	1,015,391,000	1.17	572,425,901
1929	1,103,203,000	1.27	657,784,847
1930	1,082,949,000	1.19	287,535,440
1931	1,027,600,000	.65	*103,355,825
1932	938,757,000	.87	63,731,111
1933	975,215,000	.67	81,701,726
1934	1,034,671,000	1.00	161,886,371
1935	1,112,673,000	.97	262,052,773
1936	1,223,179,000	†1.08	430,181,308
1937 (First Half)	Up 10%	Up 10%	Up 50%

*Loss. †Estimated.

This table indicates clearly why the profits of 1926 were comparatively high, the prices of oil having been unusually attractive. The materially lower price of 1927 similarly helps explain the sharp drop in oil company profits, despite some gain in demand. The decline of prices attended the high rates of production at Seminole and in West Texas and the running of crude to storage. In 1928 prices worked a little lower, but demand was up sharply, and oil company profits improved. In 1929 both crude prices and oil consumption increased, and profits established the record that still holds. There was overproduction in 1929, as in several preceding years, and crude oil was going into storage; but prices held up, because demand still was increasing and a boom spirit prevailed, causing strong demand.

TABLE 4

Annual Net Profits of 5 Oil Companies in the Past 4 Years

After all deductions, including interest, depreciation, depletion, amortization, federal taxes, minority interest, etc.

YEAR	Argo Oil Company	Arkansas Natural Gas Corporation	Quaker State Oil Refining Corporation	Standard Oil Company of Nebraska	United Gas Public Service Company and Subsidiaries	Total of 5 Companies of Table 4
1933	$*412,229	$1,948,549	$1,045,236	$ *285,233	$1,412,988	$3,709,311
1934	*76,840	1,506,716	630,506	*624,314	3,476,063	4,912,131
1935	157,634	2,394,609	914,567	*20,919	3,861,969	7,307,860
1936	283,103	5,255,062	1,041,034	74,326	9,770,718	16,424,243

*Loss.

Oil Use Turns Down

In 1930, however, demand began to contract, and with much crude in storage, prices declined, resulting in sharply lower profits for oil companies. In 1931 demand continued to decline, and yet the giant East Texas oil field, just discovered, was straining at the proration tethers, threatening to flood

[*Continued on page 60*]

TABLE 5

Annual Net Profits of 3 Oil Companies in the Past 3 Years

After all deductions, including interest, depreciation, depletion, amortization, federal taxes, minority interest, etc.

YEAR	Empire Oil and Refining Company	Red Bank Oil Company	Sunray Oil Corporation	Total of 3 Companies of Table 5
1934	$*4,019,728	$*40,734	$209,127	$*3,851,335
1935	*1,079,059	*43,169	333,837	*788,391
1936	*338,811	*126,429	550,440	85,200

*Loss.

RECENT DEVELOPMENTS IN *Illinois Basin* AND THEIR SIGNIFICANCE

By ALFRED H. BELL,
Head of Oil and Gas Division,
Illinois State Geological Survey

SINCE the beginning of 1937 three new oil fields have been discovered in the Illinois basin, two of them near the deepest part of the basin as contoured on the base of the Pennsylvanian system. Data from the new wells permit the construction of a revised contour map on this horizon and confirm the prediction published previously that structural irregularities exist in the deeper part of the basin. The three discovery wells were the first three wells in Illinois to be located by means of seismograph surveys—a truly remarkable record. Although leasing and seismic surveying have reached a fairly advanced stage in much of the deep basin area, there has as yet been little exploratory drilling. The discovery of further new fields may be expected but the nature of the controlling structures and the sizes of the productive areas are yet to be demonstrated.

For an index map of the whole basin the reader is referred to "Natural Gas—A Symposium," American Association of Petroleum Geologists, Tulsa, Oklahoma, 1935, page 814.

Prospects for the development of important new oil production in Illinois have never appeared brighter than they do now. Developments during the last four months appear to furnish solid ground for this optimistic view. The purpose of this article is to review these developments, and to consider the geologic significance of the new data and their bearing on the future course of the industry in our state.

Historical Background

Briefly, the history of the oil and gas production in Illinois may be conveniently divided into three periods: (1) Prior to 1905, the year production began in the Southeastern Illinois field; (2) 1905-1934, a 30-year period during most of which oil production and interest in future possibilities continued to decline; (3) 1934 up to the present, during which one of the largest leasing plays in history has taken place, and in which the comparatively new method of structural exploration, the reflection seismograph, has played a leading part.

During the first of these three periods (up to 1905) oil and gas production in Illinois was small and insignificant as a factor in the national economy. The Litchfield pool, in which development began in 1882, was the first in the state to yield oil in commercial quantities. The Sparta gas field was also developed during this period.

During the second period the discovery and development of the Southeastern Illinois field brought Illinois into the front rank of oil producing states, and in the years 1908 to 1910 it was exceeded in oil production only by Oklahoma and California. In the year 1908, Illinois produced 19 percent of the nation's total oil. Ever since 1910, with a few exceptions, there has been a decline in the annual production from year to year. New fields were discovered in the western part of the state and some extensions were found to the producing area of the Southeastern field, but none of the new discoveries were of the same order of magnitude as the Southeastern field itself. For that reason the history of the production of the whole state has been largely that of this one field which has produced 97 percent of the state's oil up to date.

The most intensive drilling in the Southeastern Illinois field was largely in the five-year period 1905-1910. About 1910 interest shifted to new major fields in Oklahoma, and for more than 20 years Illinois received scant attention from the industry as a whole. The greater part of the exploratory drilling in these years was confined to the marginal areas of the basin. Under current theories of oil migration the deeper parts of large structural basins were considered unfavorable areas because it was thought that any oil once present had migrated out towards the edges. However, the discovery of important oil production in the center of the Michigan basin in 1928 showed this theory to be erroneous and that the central part of the Illinois basin ought to be regarded as prospective oil territory if favorable local structures are present. The problem then became how to find the areas of favorable structure.

In most of the territory glacial drift obscures the bed rock so that the mapping of structure by surface geologic studies is not feasible. There appeared to be an excellent opportunity for the use of geophysical methods such as the seismograph.

Statewide studies of Pennsylvanian stratigraphy by J. M. Weller, H. R. Wanless and others showed that in some areas it is possible to correlate outcropping beds in sufficient detail to permit the mapping of structure. A structure contour map of such an area was published March 1, 1936, in Report of Investigations No. 40 of the Illinois State Geological Survey. This publication has been recently reprinted.

It is probable that detailed surface structure may be worked out in still other areas, especially if sup-

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plemented by data from shallow test drilling. Such drilling might permit correlation between areas of outcrop in which the stratigraphic relations are unknown or uncertain and would provide additional datum points for structure.

Patoka Field, Marion County

The first of the 1937 discoveries in Illinois was Adams-Louisiana Oil Company's Merryman 1, which struck oil in the Benoist sand (basal part of the Chester series) at 1391 feet on January 27. In an initial flow test after a 10-quart nitroglycerine shot the well yielded 86½ barrels of 38 degrees A.P.I. oil in 16 hours through a ½-inch choke. Initial production on the pump was 140 barrels per day.

Up to date five wells have been completed on the Merryman farm, having an average initial daily production of 100 barrels. Eleven wells are now drilling in the vicinity of Patoka; two rigs are standing.

Although available data do not permit a close estimate of the future size of the productive area of the Patoka field, it seems probable that it will be several hundred acres. For comparison the Sandoval field, 8 miles to the south, had a total area of 770 acres, and the Carlyle field, 20 miles to the southwest, 915 acres.

The finding of the Patoka field suggests that other fields of comparable size remain to be discovered in this part of Illinois.

The possibilities of deep production in this part of Illinois are yet to be explored. In the Sandoval field no record is available of a well penetrating the Lower Mississippian. The Devonian-Silurian, Kimmswick or "Trenton" and the St. Peter remain untested on any of the structures in the vicinity of Centralia. In the Carlyle field one well penetrated the Devonian-Silurian and found salt water. The Trenton and St. Peter remain untested.

Cisne and Clay City Fields

In rapid succession oil was discovered in Pure Oil Company's Weiler 1, near Clay City in Clay County, on February 26, 1937, and in the same company's Bradley 1, near Cisne in Wayne County, on March 4, 1937; the former in the Cypress sandstone (equivalent of the Kirkwood sand in Lawrence County and the Carlyle sand, Clinton County), the latter in the McClosky sand, (Ste. Genevieve limestone of the

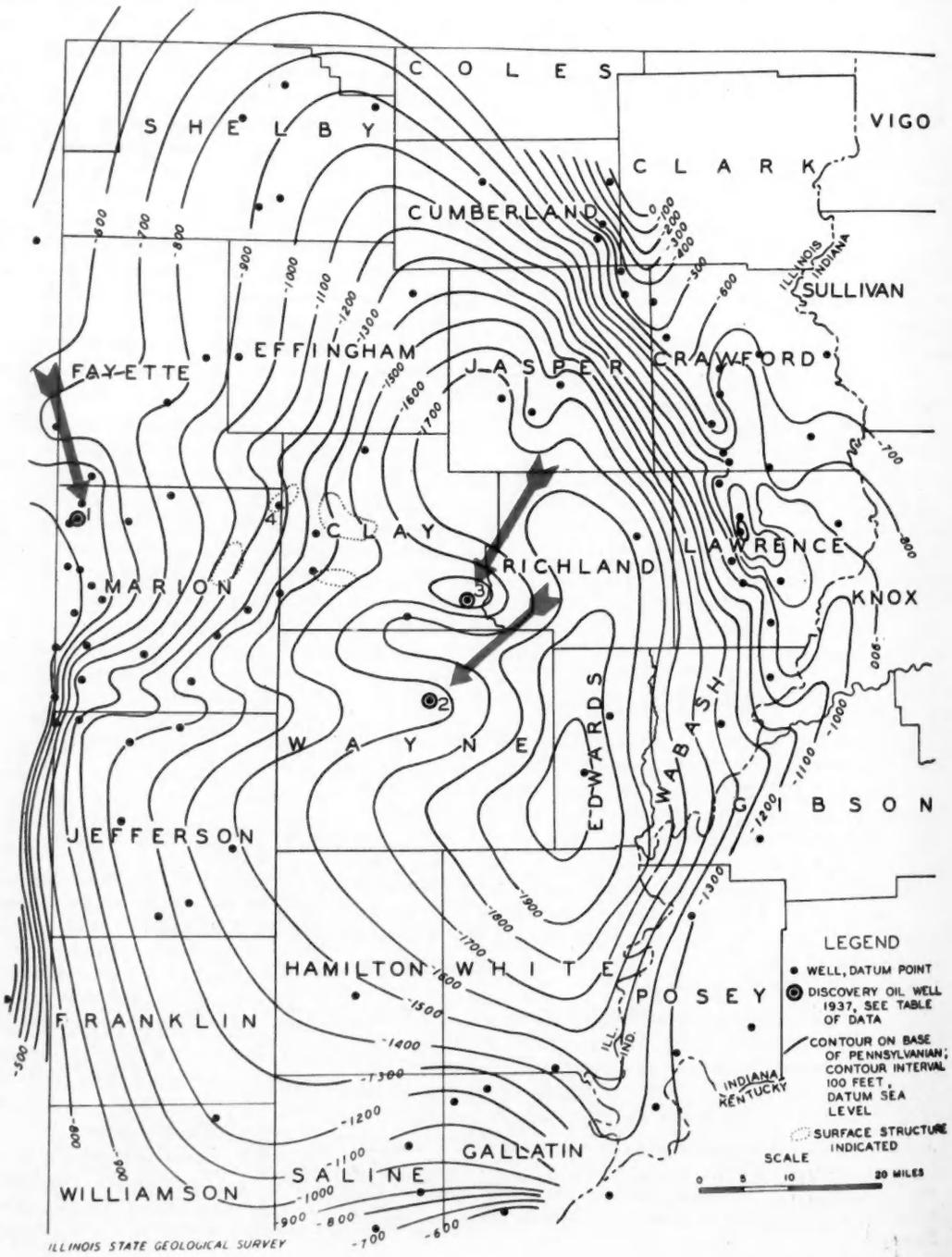


FIGURE 1

Central part of Illinois basin. Subsurface contour map on the base of the Pennsylvania system, a surface of unconformity. Revised, after Illinois State Geological Survey Rept. of Investigation, No. 40 (Figure 2, page 14). Unnumbered data points are those shown on the earlier map. The numbered data points are listed in Table 1.

The dotted lines are the approximate outlines of surface structures shown in Report of Investigations, No. 40 (Figure 4).

Lower Mississippian series). Initial production of the Weiler well was 40 barrels and of the Bradley well 100 barrels.

Pure Oil Company's Billington 1 well, located 660 feet west of the Bradley, was drilled by the rotary method and the strata were cored for some 200 feet in the basal Chester and Ste. Genevieve. Three oil saturated sections were found and the well is estimated to be as good a producer as the Bradley.

The most spectacular development to date is Pure Oil Company's Travis 1 in the Clay City field, located ¼-mile north of the Weiler 1. This well reached the McClosky sand horizon in the Ste. Genevieve limestone at 2950 feet on May 18, and in a 20-minute flow test through casing was estimated good for 1000 barrels. In a 24-hour flow test through 2½-inch tubing with a 1½-inch choke May 23 and 24 the well yielded 2642 barrels of oil having an A.P.I. gravity of 40.8 degrees. The yield for the second 24 hours was 2564 barrels. Initial gas production was 1,340,000 cubic feet per day.

This well ranks in initial production with the best wells in the Southeastern Illinois field. There the largest initial production was yielded by wells in the same "sand" as the Travis well, namely the McClosky, the largest of which was reported to be 3600 barrels.

The high reservoir pressure in the McClosky sand at the Travis well is indicated by a casing head pressure of 460 pounds per square inch, and a tubing pressure while flowing of about 200 pounds per square inch.

The finding of oil in commercial quantities in the central basin area in localities 35 to 40 miles from the nearest production to the east and to the west is a definite answer to those who considered the region unfavorable. Our estimate of the chances of finding a number of new fields in this large territory is considerably enhanced by these discoveries.

The nature of the oil-bearing structures, their sizes, and shapes, amounts of closure, trends, dips in various directions, and the relation of the productive areas to porosity trends, shorelines and other features are matters for future drilling and geologic study to reveal.

As yet it is impossible to prepare detailed maps of the new fields based on drilling data.

Structure of the Basin

A subsurface contour map on the base of the Pennsylvania for the deeper part of the Illinois basin was published March 1, 1936, in Illinois State Geological Survey Report of Investigations, No. 40. The accompanying map (Figure 1) is a revised subsurface contour map of the same area on the same horizon.

Comparison with the earlier map indicates that the principal differences are in the vicinity of Pure Oil Company's new wells in the basin, the Bradley near Cisne, and the Weiler near Clay City.

As stated in Report of Investigations, No. 40 (page 9), the reason for choosing the base of the Pennsylvanian as a key horizon for a subsurface contour map of the central basin areas was the lack of any shallower horizon which could be generally recognized in the well logs. In the marginal area to the west, extending from the longitude of Centralia nearly to the western boundary of the Pennsylvanian, Herrin (No. 6) coal is an excellent key horizon and numerous contour maps on it have been published. East of Centralia, however, it is definitely identified only as far as Odin, and farther east its position in most well logs is in doubt. The base of the Pennsylvanian is recognizable throughout the basin area in sample study logs of wells deep enough to reach it, and by correlation with the sample study logs its position in many drillers' logs can be determined approximately.

The disadvantage of a surface of unconformity as a key bed for structure is due to the fact that its irregularities are in part the result of the irregular topography of an erosion surface as well as to later structural deformation. In spite of this limitation, a subsurface contour map of an unconformity is of value if it reveals major structural trends, some of which are known to be associated with commercial deposits of oil. Thus, the La Salle anticline, on which the Southeastern Illinois field is located, is conspicuous in Figure 1 which is a map on the pre-Pennsylvanian unconformity.

The revised map on the base of the Pennsylvanian shows irregularities of this surface in Clay and Wayne counties that are almost certainly the result of structural deformation. At both the Weiler and Bradley wells the elevation of this horizon was found to be more than 200 feet higher than indicated by the previously published map. The contours, of course, represent the writer's interpretation at this time and are subject to revision when further data are obtained. East-west trends for the "highs" have been assumed, mainly on the basis of the suggested trends at these localities in the earlier map. The Clay City anticline appears to line up with the Xenia dome (shown dotted). On the other hand, the axis of an anticlinal nose in southern Jasper County (accentuated in the later map because of a revised elevation) lines up with a straight line connecting the Bradley and Weiler wells which may indicate that the interpretation of east-west axes is incorrect. Very probably seismograph results already obtained would settle this question if they were available. The data from further drilling will be awaited with much interest.

TABLE 1

Data on Recent Illinois Basin Wells

(See Figure 1)

Map No.	LOCATION					Company	Farm	Total Depth	Elevation	BASE OF PENNSYLVANIAN	
	County	1/4 Section	Sec.	T.	R.					Depth (Feet)	Elevation (Feet)
1	Marion	Cen.SE.SW.	21	4N.	1E.	Adams-Louisiana	Merryman No. 1	1418	499	863	—364[1]
2	Wayne	SW.SW.NW.	26	1N.	7E.	Pure Oil Co.	Bradley No. 1	2987	430	1965	—1535
3	Clay	SE.SW.SE.	33	3N.	8E.	Pure Oil Co.	Weiler No. 1	2613	433	1882	—1449
4	Marion	SW.SE.	12	4N.	4E.	T. E. Baldwin	Nichols No. 1	2130[2]	629	1755	—1126

[1] Indicates local closure not shown on map.
[2] Shut down May 28, 1937.

Drilling Problems

IN THE

Illinois Basin

By R. N. McILVAIN, JR.,
Manager, Illinois Producing Division,
The Pure Oil Company

The Illinois Basin has forged to the front the past year. Vast assembly of leases indicates greater drilling activity, and which is already showing an upward trend. Therefore the accompanying article is of importance, especially since it is written by a party closely connected with the work in the region. Particularly are the remarks of the author on the use of rotary drilling machines of value, because this type of drilling is just entering the area.

MOST of the problems to be mentioned were encountered in isolated wildcat wells in the deepest part of the basin although, in general, these problems will occur in surrounding areas.

Cable Tools

Very little gas is available in the basin and when drilling with cable tools the most practical power appears to be gasoline engines or full or semi-Deisel engines. Sufficient water may be obtained from shallow wells or nearby streams.

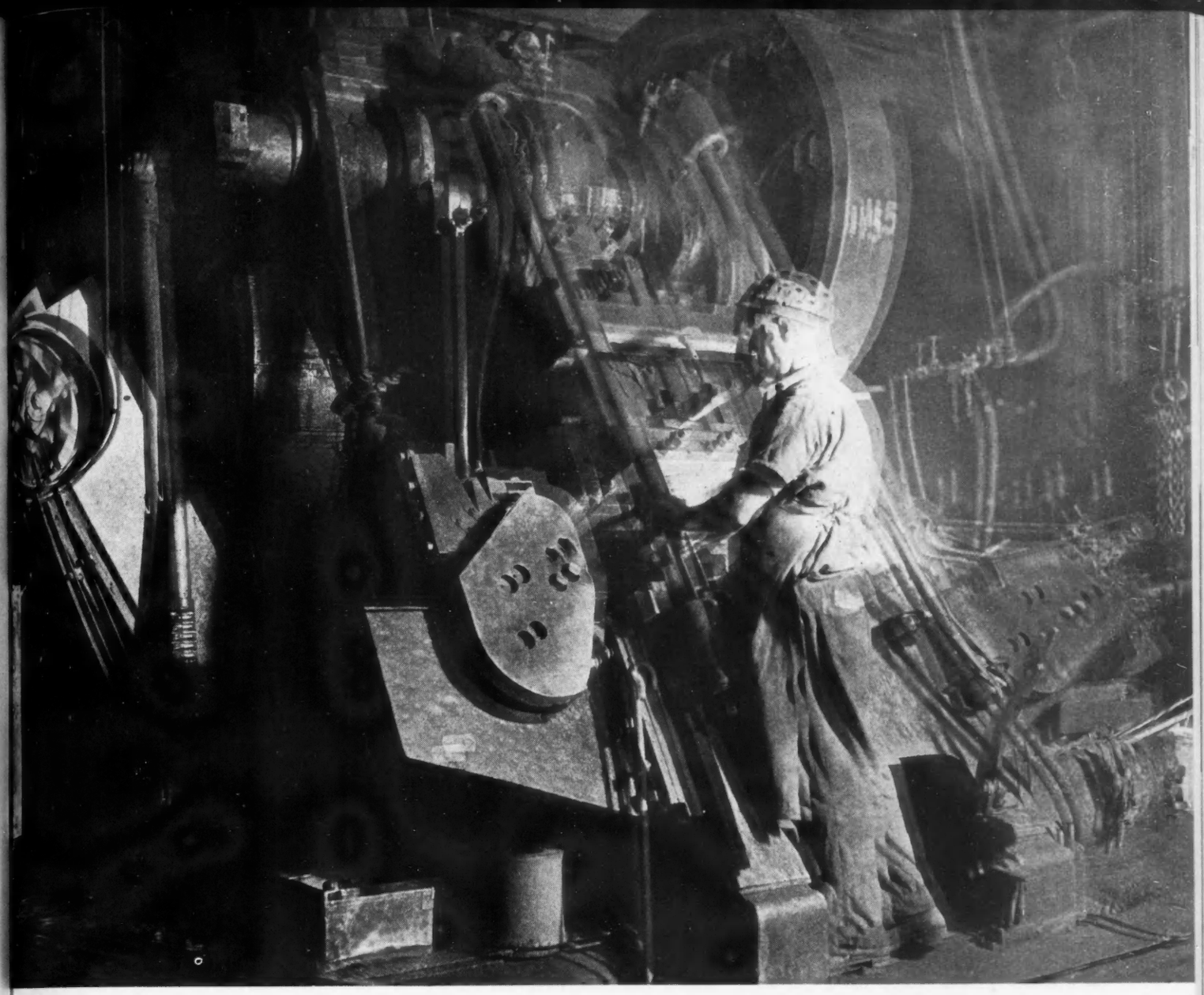
In general, the hole stands up fairly well for the first 1500 feet, and below this depth the cavey shales encountered present a problem. The shales cave readily in a dry hole and extremely rapidly in a wet hole. Due to this fact, if the wells are to be carried to an appreciable depth and, at the same time, end up with a good sized hole, the well should be started with large diameter casing in order to provide clearance for subsequent strings of pipe which may and probably will be necessary. In two cases, in which I am particularly familar, the cavey formations gave so much trouble that it was found necessary to "carry the casing" with the tools. At times it is not possible to make enough hole to permit lowering the casing a full joint at a time and, for this reason, some pup joints as short as two feet in length have been used. It was found that even though the casing was in open hole for only a short distance the casing would become stuck. To permit carrying the various strings of casing to the desired casing depths it was found necessary to resort to the use of commercial mud, which was pumped into the annular space and circulated to the surface of the ground. Some strings of casing were mudded as many as three times before reaching the desired casing point.

If several strings of casing are to be run in a well and left there for some time, it is believed that mudding the casing will increase recovery of the casing when it is eventually pulled.

Since it is sometimes necessary to carry various strings of casing with the tools considerable underreaming is necessary. Very little difficulty is had in underreaming, but the main difficulty is in mixing the shale and slate from the underreamed portion of the hole, so that same can be withdrawn from the hole by the bailer.

The use of an underdrill bit may be faster and more economical than an underreamer. Underdrill bits are

This paper was presented before the annual conference of the Illinois-Indiana Petroleum Association, held at Robinson, Illinois, on May 29, 1937.



MACHINES THAT NEED RUBBER HEELS

A typical example of Goodrich development in rubber

THIS is the way machines used to look in an Ohio manufacturing plant. The huge press vibrated, and transmitted so much of its vibration to the floor that delicate grinding machines nearby were affected—every time the press plunged down, the grinders jumped so that their product could not be made to the .0006-inch tolerance required. Everything was tried—even a special individual foundation for the press—but vibration still continued.

A Goodrich engineer had discovered a way to bond rubber inseparably to metal. Strengthening that bond to bear the weight of heavy industrial machinery made possible the "Vibro-Insulator"—and shock and noise in industry were defeated.

Goodrich Vibro-Insulators are literally rubber feet for anything which vibrates. They consist of two pieces of metal—one attached to the machine, one to the floor—bonded together with rubber so that the machine virtually hangs in the air, partly suspended and partly resting on the rubber, which absorbs the vibration and so kills the shock and noise.

The manufacturer equipped his grinders with these Vibro-Insulators—and rejects were reduced to the vanishing point.

Hundreds of concerns have used this Goodrich development to increase accuracy of product, improve efficiency of workers, lengthen life of machines. But the important point—important to every plant in every industry—is that this development is typical of the constant research going on at Goodrich—research which develops new rubber compounds and new uses for them, to make every Goodrich product the best value money can buy. The B. F. Goodrich Company, Mechanical Rubber Goods Division, Akron, Ohio.

Goodrich

ALL *products problems* IN RUBBER

used extensively in the Southwest and may prove effective in this area when starting on bottom. In other words, they are good when new hole is being made but, for underreaming alone, the underdrill bit will tend to stay in the old hole rather than underream.

The use of commercial mud in sacks tied to the tools would probably be effective in combating cavey shale.

So far as it has been possible to learn, few if any boulders have been encountered in the basin and very little trouble has been had with crooked holes.

Practically every sand encountered below 300 feet carries a full head of salt water. In order to avoid the remote possibility of this head of salt water drowning out a low pressure sand and thus possibly passing up a show, it is desirable to dry up the hole before penetrating a sand—after having reached a depth below which shows might be anticipated. Mudding a string of casing will also help in obtaining a tight casing seat. This is an expensive but safe way to drill a wildcat well.

Electric logging surveys will probably not be used extensively in connection with cable tools for the reason that there can be very little open hole at any time.

The company was prepared to make drill stem tests on its two recent cable tool wells in the event that it was not possible to obtain sufficient information through other methods. This is seldom done, but under certain conditions it may prove to be a worthwhile practice.

Rotary Drilling

Fuel and water problems with a rotary rig present more complications than when using cable tools. It is believed, that either a Diesel, or steam economy rig, or a combination of both will be the most practical to use. It is problematical whether shallow water wells will furnish sufficient water for a rotary rig in dry seasons. In other areas of the country adequate water may be secured by drilling deep water wells, however, if this were done in the basin, salt water would be encountered. The safest practice is to lay a line to a reliable source of water.

The surface of the ground stands up very well and only a small amount of conductor pipe is necessary. From three to four hundred feet of surface pipe is necessary. Rotary drilling in the basin is more economical when using rock bits rather than fishtail or drag bits. Considerable footage is made by rock bits until reaching a depth of approximately 1600 feet at which point progress becomes slower. Two cone rock bits have proved useful in keeping the bit from becoming "balled up" when drilling in broken shale formations.

Very little mud is made above 2000 feet and in some cases not even then. It appears that mud making formations are not the same over a large area. Since so many sands are encountered at shallow depths it is probably just as well that very little mud is made before reaching 2000 feet; particularly since the hole stands up fairly well. Drilling with thin mud allows the sand to settle out of the drilling fluid and reduces wear on pump parts and other metal equipment. Whether or not any good native clays are available for mud has not been definitely determined.

Some of the formations in the basin are quite broken and rapidly grade from soft to extremely hard or vice versa. So far, no particular difficulty has been encountered in drilling straight holes. However, in order to be sure of the greatest protection in this connection it is recommended that adequate drill collars be used.

Formations apparently present little difficulty in coring as 90 percent core recovery has been effected.

When considering the problem of testing rotary wells, the mud problem becomes more serious. As previously stated, the hole stands up reasonably well for drilling purposes, however, when making a drill stem test the mud must necessarily be in better condition. When a testing tool is used, it is desirable that a minimum amount of shale, cave, or sluff off into the hole. This cave problem is increasingly important when it is desired to leave the tool open for thirty to forty-five minutes or longer. It was desired to drill stem test two rotary wells some eleven miles apart. In one case it was found that a slight addition of commercial material conditioned the mud so that a short test was feasible; in the other case the mud was so poor that it was necessary to discard the entire amount of fluid in the system and build up a new mud by starting with fresh water. This was necessary for the reason that the hole could not be walled off to permit seating the tool in the top of the rat hole and the mud was so salty that the addition of commercial muds would have had little effect. Having to replace a mud circulation system is expensive and for this reason considerable mud control work will have to be done in the near future in order to make operations as economical as possible in this connection.

It is entirely possible that the use of electric logging devices will have some governing factor on the question of "What is good and usable drilling mud." An electric device will not function reliably when used in a high salt content solution, and in this connection it may prove feasible to dilute the mud 50 percent or more after having penetrated the Pennsylvania sand bodies and condition the mud from that point. This would result in two things—a smaller sand content, and a better mud to wall off the hole when coring or making drill stem tests.

Completion Problems

Completion problems are of vital importance. I have in mind this situation—a broken shale and lime formation occurring directly above a saturated sand. Assume that this sand would produce at a better rate if shot. If the sand were shot high enough and hard enough to do any appreciable good, it is reasonable to assume that a large shot hole woul be made, part of which at least might extend into the shale section and this condition would obviate the possibility of the effective use of a cave catcher on a liner.

Another way which has been suggested to keep the shale from being a troublesome problem over a period of years is to drill a rotary hole to a point far enough above a sand to permit shooting, run and cement casing, and drill into and to the bottom of the shale with cable tools, and running with the tools at this position long enough to permit or make the shale cave and produce a relatively large hole. This hole to be filled with cement and upon having set, drill through the "mushroom type" cement plug and on into the sand. What effect shooting would have on this plug is problematical, however, there is a chance that even though the plug were cracked it would keep the shale out of the hole and either entirely eliminate the necessity of a liner or permit the successful use of a cave catcher on a liner.

It is believed that it will be most economical to complete wells by drilling into the sand with cable tools. The use of some type of portable spudder will be most practical.

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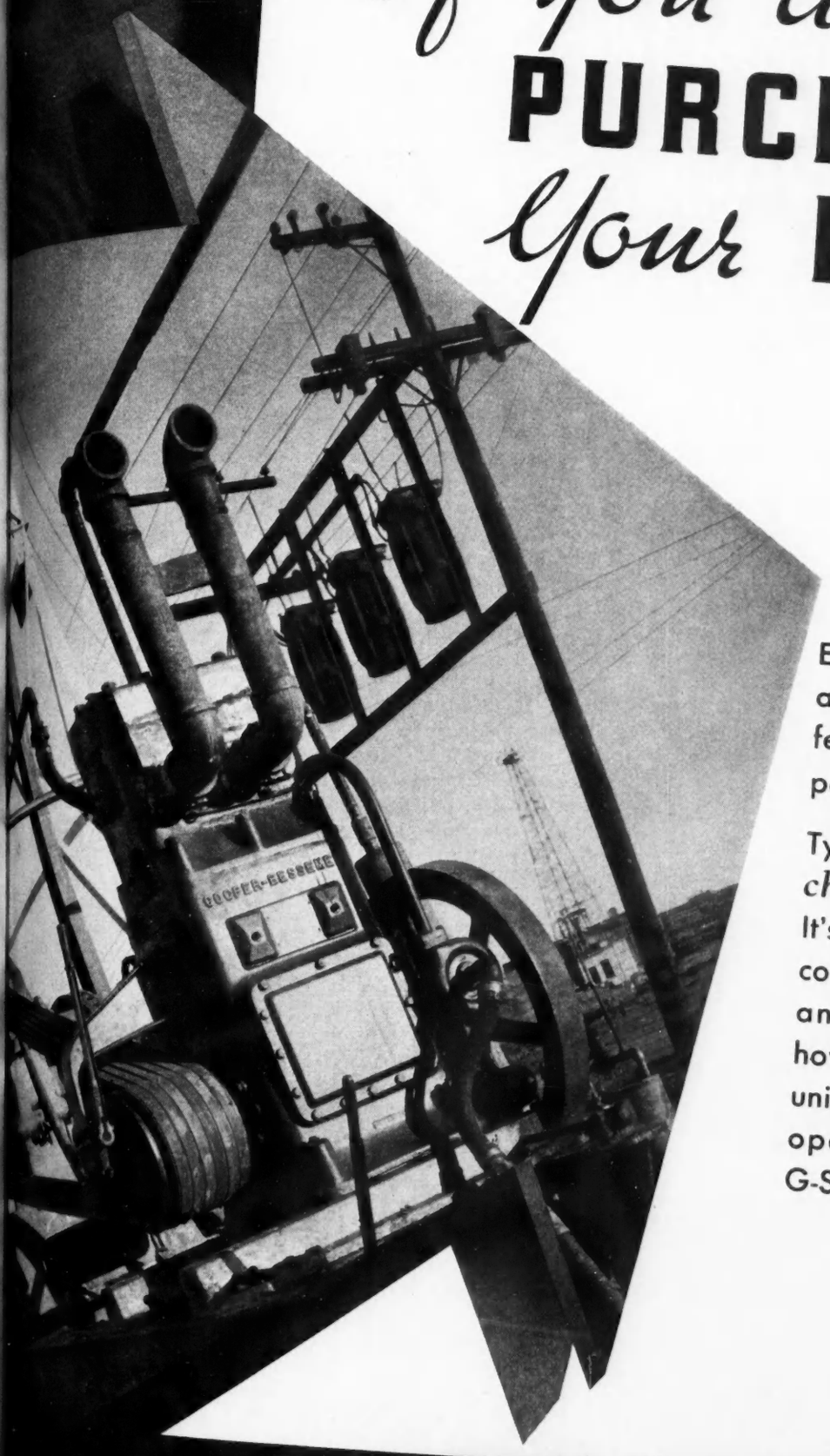

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OIL AND GAS POSSIBILITIES IN

Northeastern Arkansas And Western Tennessee

By W. P. JENNY,
Consulting Geologist and Geophysicist

IF we consider the large number of reported oil and gas shows in seepages, in shallow water wells and in wells drilled for oil, distributed all over northeastern Arkansas and western Tennessee, as shown on the supplement map inserted in this issue, we can readily understand that this area has repeatedly attracted the attention of oil men during the past decades.

Regional magnetic investigations in this district have yielded interesting structural and stratigraphic information, which, combined with the known geology, indicates that the oil possibilities of that area should be even better than has generally been assumed so far, and that this region is well worth serious consideration.

Oil and Gas Shows

A large number of oil and gas shows in seepages, in shallow water wells and in wells drilled for oil are mentioned in unpublished geological reports by A. Hermann on western Tennessee (1927) and by S. C. Wilson on northeastern Arkansas (1935).

Some shows are reported in well logs as contained in U. S. Geological Survey's Water-Supply paper 656, and valuable information to that effect could also be gathered from statements made by local residents.

Hermann mentions a shallow well near Tiptonville, which furnished illumination and fuel for a residence for several years until the Mississippi overflow in 1921 drowned it. Thirty miles further south, on J. K. White's land near Tigertail, gas was found at a depth of 36 feet in the fall of 1924 and burned for several years. Other shallow gas wells are reported near Miston and between Gratio and Lenox. Hermann mentions several oil escapements (hog-oil) near Crocket, at the contact of the LaGrange and Fayette formations, likewise further south in the vicinity of Kenton, Yorkville and Eaton.

Wilson reports oil and gas escapements along the Mississippi River; much Ozokerite in sand blows; high pressures in the Tshudy artesian well (southeastern Poinsett County) and in a well at Turney (northeastern Cross County); gas burning (1935) in the Wheatley well (69; southwestern St. Francis County); oil and gas shows in a number of other wells throughout the district, which are partially confirmed by well logs published in Water-Supply paper 656.

From the wealth of reported oil and gas shows it certainly appears that the main prerequisites of a future oil region are present in this district.

Geology

The area to which this paper is specially devoted extends from Memphis, Tennessee, 100 miles in a westerly, northerly and easterly direction. It is generally considered the northernmost extension of the Gulf Coastal Embayment, and is covered mainly by Alluvial deposits on the Arkansas side, and by deposits of the Wilcox group on the Tennessee side of the Mississippi.

A considerable number of shallow tests have been drilled in the search for oil. Some of these tests were drilled to the Paleozoic floor and a few have been carried from 500 to 1000 feet into these rocks.

The Paleozoic floor forms a trough, with its axis roughly parallel to the Mississippi. The Paleozoic sediments crop out in southern Illinois, and along the Paleozoic escarpments 90 miles east and west of the Mississippi. The Paleozoic floor is deepest near the mouth of the Arkansas River, where its depth is estimated at below 6000 feet.

Along the Mississippi River the Paleozoic floor lies at 3500 feet near Memphis, and at 1700 feet near Tiptonville in the northwestern corner of Tennessee.

A normal section above the Paleozoic floor near Memphis would comprise 1000 feet of upper Cretaceous, 500 feet of Midway and 1500 feet of Wilcox. With a decreasing depth of the Paleozoic floor these formations are thinning towards the west, north and east.

Surface Structures

Domal structures have been mapped by Fuller near Tiptonville, Reelfoot Lake district, northwestern Tennessee, near Blytheville and near Etovah, both in Mississippi County, Arkansas.

Crowleys Ridge extends from Helena northwards

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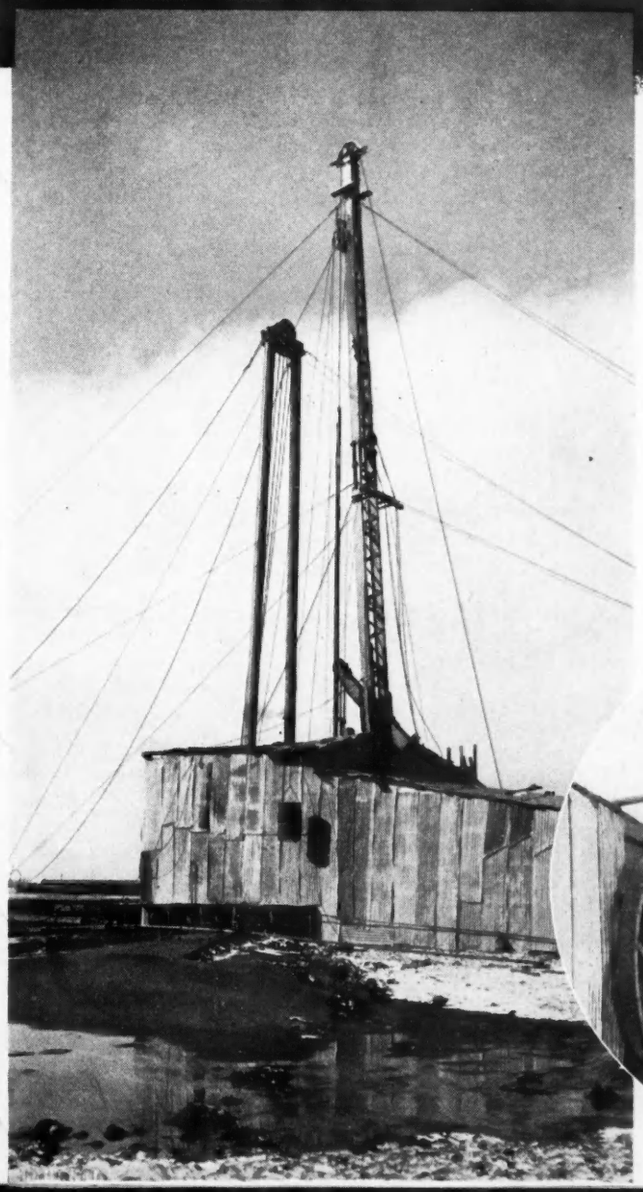

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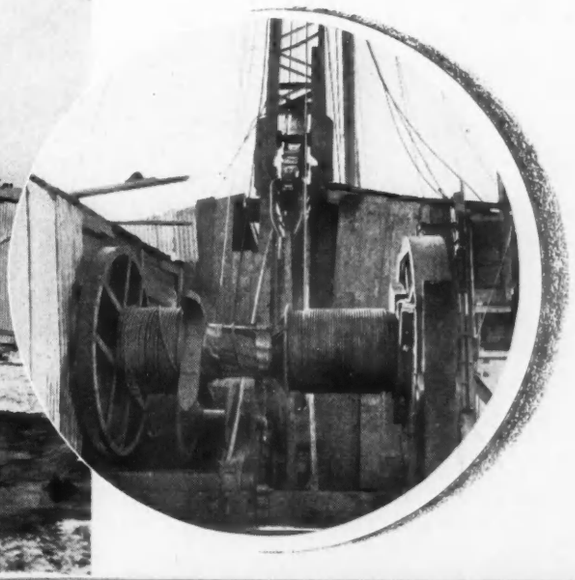

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towards Jonesboro, and from there on in a northeasterly direction into Missouri. Along this ridge we find the only Wilcox outcrops within the Alluvial deposits west of the Mississippi. From surface geological investigations this ridge is generally considered as purely an erosional feature.

The Reelfoot Lake has been formed during the New Madrid earthquake in 1811-13, probably through the settling of shallow sediments. Due to this relatively recent phenomenon, much attention has been paid to this area by geologists and oil men. A number of tests have been drilled in this district which resulted in good shows in some of the wells, especially in the Scott well (2, much gas reported)* and in the Bradshaw well (6, some oil reported).

Regional Magnetics

Before entering into a detailed discussion of the regional magnetic map (published as an insert), the writer wishes to emphasize that magnetic positive or negative trends should by no means be interpreted as definitely indicating anticlinal or synclinal structural trends respectively. It is only through inference with geologic data that any geophysical data, especially magnetic, may safely be interpreted into terms of structure.

The Nemaha Granite Ridge, for example, which extends through Kansas toward and beyond Oklahoma City, is expressed magnetically by a more or less pronounced positive trend. Along this trend lie the Crescent and the Oklahoma City fields. The Crescent field coincides with a local magnetic positive anomaly, the Oklahoma City field with a local negative anomaly. In the writer's opinion, the magnetically positive influence of the local granite uplift below the Crescent field outweighs all other influences, whereas in the Oklahoma City field the granite lies deeper, is locally less uplifted, and the non-magnetic Ordovician dolomites penetrate into, and displace a thick section of the overlying highly magnetic shale beds, thereby creating a magnetic low.

In the accompanying map, the southern extension of the Cumberland River anticline is represented by negative magnetic trend 16, whereas the Tiptonville, Blytheville and Etovah Domes of Fuller lie along positive magnetic trend 5, which in all probability must be explained as an anticlinal axis. Magnetic beds (probably Pennsylvanian) uplifted along trend 5, may have been uplifted too high and eroded or never deposited at all along trend 16.

Magnetic Zero-Isogam

Since regional magnetic isogams are the complex result of highly complicated structural, petrographic and stratigraphic subsurface conditions, they are as a rule more confusing than constructive in the analysis of an extended area and are therefore not shown here, with the exception of the absolute zero-isogam. This isogam gives a general idea of the magnetic character of certain regions, the areas on the —side being of a negative, the areas on the +side being of a positive magnetic character. The minimum for the negative areas lies at —250 gammas; the positive areas reach local maxima as high as 500 to 700 gammas and over 10,000 gammas near Rison.

The area of the oil fields in southwestern Arkansas is represented by a regional negative anomaly; another regionally negative area lies to the southeast of Little Rock; a third negative area is found to the north of Forrest City; a fourth extends from Blytheville (Arkansas) through Ripley (Tennessee) towards Selmer. It is interesting to note that the South Fork and Hatchie Rivers flow along the north and south boundaries respectively of this negative area in Tennessee. Two negative southeasterly-northwesterly trends lie to the west of Nashville, the easterly trend representing a southerly extension of the Cumberland River anticline of Kentucky, which has been shown in a previous paper (see references) to be of negative magnetic character.

Discussion of Profiles

From south to north along profile 1, we find first a magnetically negative area, then a magnetic high at Malvern, and another at Benton and further north a magnetically negative regional area at Little Rock. The Arkansas valley is represented by a considerable magnetic positive anomaly, with two high areas to the north and south and a slightly lower area, but still strongly positive, at Searcy. The Ozarks are regionally of a magnetic negative character.

Southeasterly Extension of Ouachitas

The magnetic high at Malvern can be followed as a magnetic positive trend through profiles 2, 3 and 4 into the Monroe and Richland uplifts. The magnetic high at Benton can be followed through profiles 2, 3 and 4 towards the area of The Texas Company's two wells near Chicot (47) and Montrose (46), which encountered igneous rocks at about 3000 feet.

These 4 magnetic profiles should construe an irrefutable proof for a structural connection of the Ouachitas with the Monroe and Richland Uplifts.

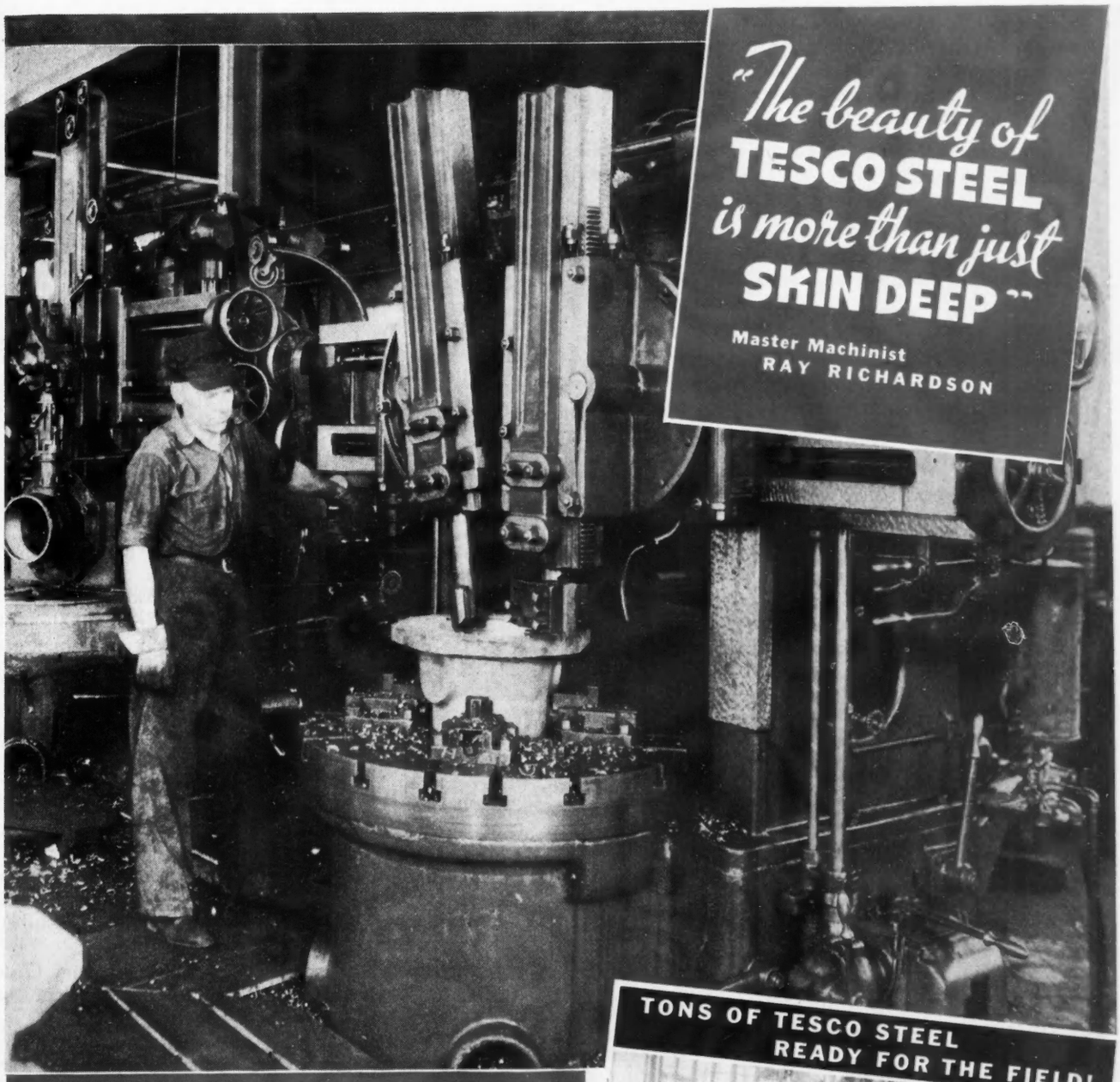
Valley Trends

The magnetic high in profile 1 near Oliphant, northern Arkansas Valley, can be followed as a positive magnetic trend eastwards towards Auvergne, where it turns sharply northeastward towards Jonesboro, Paragould, Piggott and into Missouri. From Jonesboro on, this positive trend runs along the east side of Crowleys Ridge. The southern extension of Crowleys Ridge from Jonesboro to Helena may actually be only an erosional remnant; it appears, however, logical to assume that a deep seated northeasterly anticlinal axis is indicated by the magnetic positive trend and that this anticlinal axis is responsible for the northeasterly extension of Crowleys Ridge, even though from a surface geological analysis, this ridge appears to be an erosional remnant throughout its extent.

The magnetically low area at Searcy can be followed eastward as negative trend 6 towards McCrory and from there on northeastward towards Cherry Valley and Lake City.

Positive trend 5 starts north of Wynne and can

*Figures refer to insert map.



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be followed northeastward through Marked Tree, Etovah, Blytheville towards Tiptonville. Since three surface geological domes are lined up squarely along this trend, it appears safe to interpret this trend like trend 7 as an anticlinal axis.

By inference also positive trend 3 (Cotton Valley-Memphis-Covington) and positive trend 1 may be interpreted as possible anticlinal axes.

Trends 1 to 8 emanating from the Arkansas Valley may be refered to as Valley trends, and as a first approximation the positive trends may be interpreted as indicating anticlinal axes, the negative trends as indicating synclinal axes.

Trends 9 and 10 are possibly stratigraphic trends, i.e., indicating buried outcrops of magnetic and non-magnetic formations respectively.

Cumberland Trends

Trends 16 to 21 show a striking parallelism with the Cumberland River anticline and may be referred to as Cumberland trends.

In order to interpret regional magnetics in Kentucky (see references), we had to tentatively assume that the Chester (upper Mississippian) and some beds of the Pennsylvanian are of greater magnetic permeability than the underlying Meramec (middle Mississippian), and further that the Cincinnatian (upper Ordovician), Silurian, Devonian and Osage (lower Mississippian) are of greater magnetic permeability than the Champlainian (lower Ordovician) and lower formations.

This interpretation is strongly supported by the magnetic conditions in Arkansas where the Arkansas Valley (Pennsylvanian) is represented as a regional positive, the Ozarks (Ordovician) as a regional negative anomaly.

Trends 7, 5, 3, 1 should therefore be interpreted not only as indicating anticlinal structural axes, but also as indicating the presence of Pennsylvanian underneath the Cretaceous and Tertiary blanket of northeastern Arkansas and western Tennessee.

The Cumberland River anticline, and its southern extension (trend 16), are of a negative magnetic character. Whether trends 17 and 18 represent structural axes or stratigraphic changes can only be analyzed by more detailed investigations.

From geological considerations, the writer is inclined to interpret trend 21 as a synclinal and trend 20 as an anticlinal axis.

While the Valley trends are dominant in northeastern Arkansas and southwestern Tennessee, the Cumberland trends dominate in the Nashville-Lawrenceburg-Union City area. In northwestern Tennessee a strong intersection of these two trends is noticeable; this intersection may be of a causal connection with the New Madrid earthquake.

Fault-Zone

A possible fault-zone runs parallel to and about five miles east of the Mississippi River. The presence of this zone is suspected on the strength of two magnetic fault indications (F) as shown on the map. The northern indication is supported by surface evidence, in as much as a 30-foot bluff lies on the east or upthrown side of the suspected fault. A line connecting the two indications runs along the east side of Fuller's areas of landslides farther to the north. The field data are not sufficient to definitely establish this zone, but since such a fault-zone, if present, might be a governing factor for possible oil accumulation in this district, it was thought advisable to mention its possibility.

Oil Possibilities and Oil Horizons

From magnetic investigations, which are to a great extent supported by surface geological considerations, it appears that a number of gentle structures may be found in northeastern Arkansas and western Tennessee, which should be well worth testing for oil.

From the writer's investigations, it seems highly probable that a considerable thickness of Pennsylvanian may be encountered, especially within the central area of the Paleozoic trough. The Pennsylvanian has been the source of much of the early oil and gas in Oklahoma; it yields considerable gas in the western part of the Arkansas Valley; in southeastern Illinois oil was first discovered in the Pennsylvanian and considerable production has been obtained from this formation. The Junction City and the Wamac pools in southwestern Illinois produce from this formation.

Below the Pennsylvanian we may expect the Chester (Mississippian), another good oil horizon, from which the greater part of the oil in Kentucky and southern Illinois has been produced.

Deeper possibilities lie in the Devonian and Ordovician formations, which are producing in Kentucky, Illinois, Ohio and Indiana.

There exists also a fair chance that some oil accumulation has taken place in the shallow Tertiary and Cretaceous sediments.

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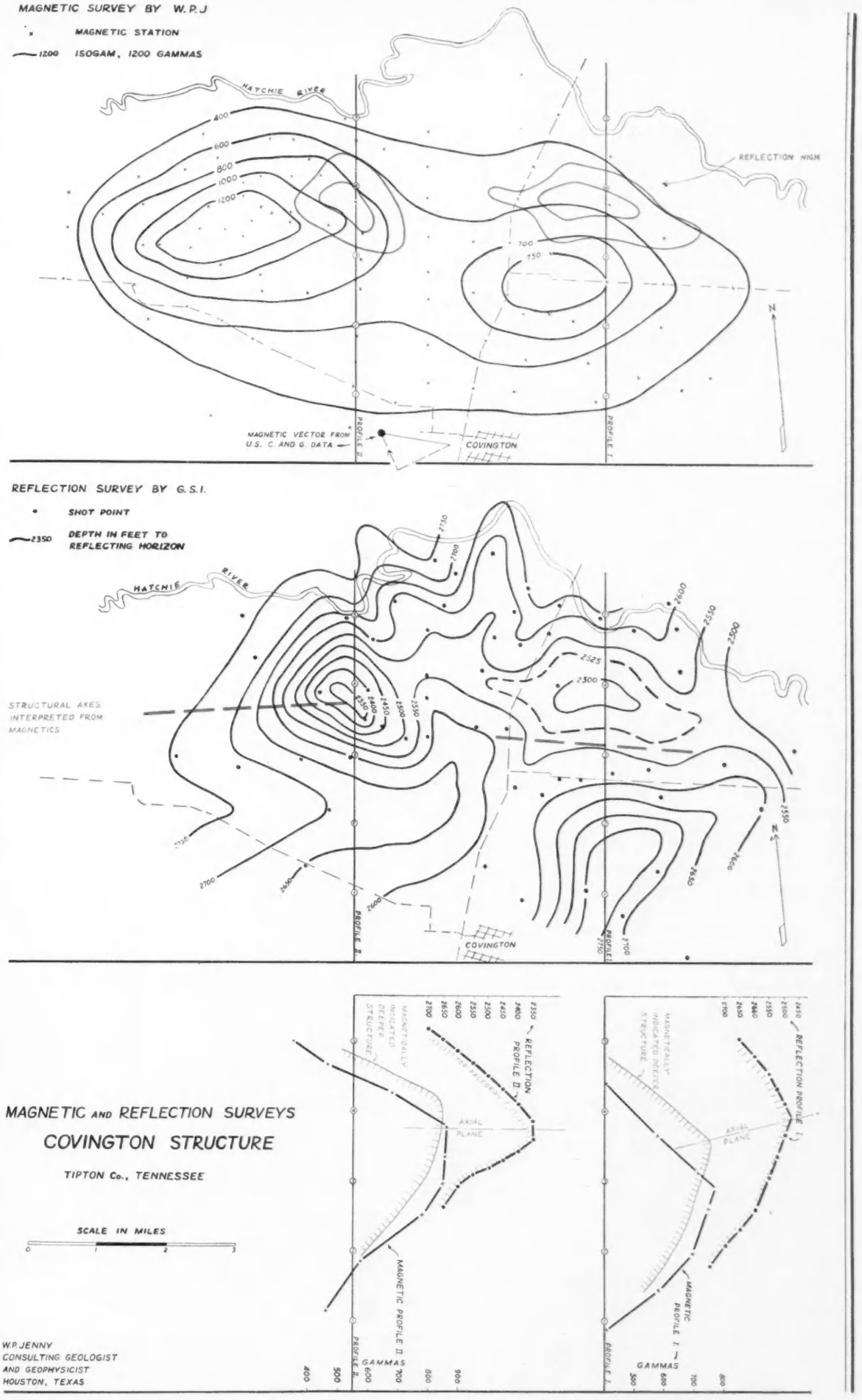
W. P. Jenny, Magnetic vector study of Kentucky and Southern Michigan, Bull. Amer. Ass. Petrol. Geologists, Vol. 18, No. 1, Jan., 1934.

Further references are given in Spooner's above-mentioned work and in "List of Publications," Jan., 1934, by Walter F. Pond, Division of Geology, State of Tennessee.


MAGNETIC SURVEY BY W. P. J
MAGNETIC STATION
1200 ISOGAM, 1200 GAMMAS
HATCHIE RIVER
400
600
800
1000
1200
REFLECTION HIGH
700
750
N
MAGNETIC VECTOR FROM U.S. C. AND G. DATA
COVINGTON
PROFILE II
PROFILE I
REFLECTION SURVEY BY G.S.I.
SHOT POINT
2350 DEPTH IN FEET TO REFLECTING HORIZON
HATCHIE RIVER
STRUCTURAL AXES INTERPRETED FROM MAGNETICS
2750
2700
2600
2530
2500
2525
2400
2450
2550
2650
COVINGTON
PROFILE II
PROFILE I
MAGNETIC AND REFLECTION SURVEYS
COVINGTON STRUCTURE
TIPTON Co., TENNESSEE
SCALE IN MILES
0 1 2 3
W.P. JENNY
CONSULTING GEOLOGIST
AND GEOPHYSICIST
HOUSTON, TEXAS
MAGNETICALLY INDICATED DEEPER STRUCTURE
REFLECTION PROFILE II
AXIAL PLANE
MAGNETIC PROFILE II
GAMMAS
400
500
600
700
800
900
PROFILE II
REFLECTION PROFILE I
MAGNETIC PROFILE I
GAMMAS
500
600
700
800
PROFILE I

Local Structures

As an example for the type of local structure, which may be expected in this general district, a magnetic and reflection picture of the Covington Structure in Tipton County, western Tennessee, is enclosed. (Map on page 31)

The structure lies three miles north of the town of Covington, and is probably the result of an intersection between a Cumberland trend and Valley trend 3; though from the east-westerly direction of the local anticline it appears, that the Cumberland influence predominates in this structure.

In the western local high along this anticline the top of the Paleozoic floor—which in all probability represents the reflecting horizon—should be encountered at a depth of 2350 feet, whereas in the eastern local high the top of the Paleozoic floor would lie at 2500 feet.

The western high is magnetically expressed by a 1200 gamma anomaly, the eastern high by a 750 gamma anomaly.

A qualitative interpretation of the magnetic anomalies places the structural axes of the deeper anticlinal uplifts about three fourths of a mile to the north of the eastern magnetic positive axis, and about one half mile to the north of the western magnetic positive axis.

The western magnetic structural axis crosses the top of the reflection high, whereas the eastern magnetic structural axis lies about one half mile to the south of the reflection structural axis.

From the combined magnetic and reflection interpretations, it may be concluded that the western anticline is fairly symmetrical and vertical, whereas the eastern anticline is slightly asymmetrical, with its axial plane dipping towards the south as shown in the profiles of enclosed map.

The eastern magnetic and reflection pictures exhibit an almost ideal agreement with one another. The western pictures coincide along profile II, but the magnetic picture indicates an elongated anticline, whereas the reflection picture indicates a domal structure.

From the agreement of the two eastern pictures, it appears probable that the western disagreement might be explained by the lack of shot-points along the magnetically indicated structural axis. Future shot-points along this axis might indicate anticlinal structure also in the upper formations.

This magnetic interpretation is strongly supported by the topography, in as much as a well expressed ridge extends along the magnetically indicated anticlinal axis. This ridge is highest and most rugged within the area of the 1200 gamma isogam.

Whatever the final findings will be, it seems to the writer that this combined magnetic and reflection picture should definitely prove his contention, reiterated during the past four years, that efficient layouts for reflection shot-points should best be based on surface geological or accurate magnetic surveys and interpretations.

In this particular case, a large number of points have been surveyed in the uninteresting northern portion of the prospect, whereas the most important structural possibility, to judge from magnetics, has not been touched at all by reflections and the reflection interpretation of the eastern high is more or less dependent upon a single shot-point.

To the west of Covington is shown the local magnetic vector, as computed from the U. S. Coast and Geodetic data. The positive vector points slightly east of the main western magnetic high area on account of an easterly attraction exercised by the eastern magnetic high. This example may again prove the value of magnetic vector investigations.

Search For Local Structures

From the foregoing paragraphs it appears logical to look for local structures first by geological and magnetic investigations. Where these methods point toward possible local structures it may be advisable to survey the suspected areas by means of the reflection method.

It would, however, be fundamentally wrong to definitely condemn a magnetic prospect by the fact that it cannot be confirmed by reflections, or to definitely accept a reflection prospect, even though it cannot be confirmed by magnetics.

In this general district sub-surface conditions are fair for reflection surveys in so far as a number of reflecting horizons were found below the more or less unconsolidated Tertiary and Cretaceous sediments. However, there exists an unconformity at the contact of the Paleozoic surface with the Upper Cretaceous.

Paleozoic local structures, indicated by magnetics, may have been levelled out by erosion before deposition of the Cretaceous sediments and reflections will indicate the Paleozoic floor to be flat over such features. On the other hand, local Paleozoic highs, indicated by reflections, may be simply erosional topographic highs on the old Paleozoic floor without any structural meaning, and would therefore not show up in a magnetic survey.

Wherever the two methods agree on a local structure and are supported by geological considerations, it seems safe to assume the presence of such a structure as proven. However, where the two methods disagree as to a particular local structure, the magnetic findings may have as much chance to be correct as have the reflection findings, if we take the limitations of the methods into due consideration.

In such instances the gravimetric methods, especially the torsion balance method, may prove to be of vital assistance in the final interpretation of either magnetic or reflection surveys.

Thus here, as in any other district, the most reliable results will be obtained by combining the findings of the various geological and geophysical methods, rather than by depending too much upon the excessive claims of one method alone.

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BECAUSE they require little attention, regulators are frequently neglected. When given the care to which they are entitled, satisfactory service results.

Maintenance of Gas Regulators

By E. C. McANINCH
Oklahoma Natural Gas Company

LONG DISTANCE transmission of gas with its necessarily high pipe line pressure, together with the necessity for reducing this pressure to a point where it can be safely and economically distributed as well as properly measured, has placed upon gas regulators a responsibility that is of major consequence. Therefore, their maintenance is of first degree importance.

Fortunately a regulator is a device that does not require an exceptional amount of attention. This very fact, however, causes them to be neglected and ignored ofttimes until their condition is such that pressure regulation has completely ceased to be.

The safety factors that enter into the distribution of gas in a community demand a guarantee that the pressure on gas lines in that area shall never become excessive. Gas measuring instruments function properly only when pressure conditions are as they should be. Many other circumstances enter into a demand for perfect pressure control and regulation.

As a result, the behavior of its regulators is of utmost concern to every gas company.

Regulators, just as all other instruments of gas control and measurement, should receive periodic attention. No set rule can be laid down as to how often this should be since conditions of operation are so greatly different. A careful study of the conditions under which a regulator is operating will show the period of time for which, ordinarily, it can be expected to function properly. A person can say safely, however, that no regulator should remain in service more than a year without being submitted to a thorough inspection and cleaning, with the replacement of such parts as is necessary.

When discussing the maintenance of regulators, it should be understood that installations are made properly and that the regulator itself is the proper size. Unless these conditions exist, proper regulation cannot be depended on, no matter how excellent the mechanical condition of the regulator may be. By proper size, we mean that the regulators should be large enough to meet the maximum demands made upon them, and yet small enough to control the minimum load. When this cannot be done through the use of a single regulator, a dual setting should be made.

Assuming these conditions, regulator troubles confronting the man responsible for their maintenance usually find their source in improper fitting valves and seats, binding of some of the working parts, wrong size of head used, or in loose connections and working parts. These are mechanical problems and to them should be added the ones of pulsation or pumping and freezing.

Valve and Seat Fittings

In any line where gas is transmitted there is a certain amount of foreign substances, such as water, oil, gasoline, rust, dirt and pipe scale. These substances are carried through the lines until some obstruction is met. Here they lodge until the force of the traveling gas becomes great enough to dislodge them. A regulator is an ideal example of such an obstruction. When the gas is comparatively free of dirt and moisture its effect upon a regulator is small, but when a great deal of dirt and moisture is present, it is either lodged against the valves and seats or forced on through the regulator. When anything lodges on either the valves or their seats, the regulator cannot shut off the flow of gas, and pressure will build up to a higher point than is desired. The same result is had when gas forces these particles through the regulator and causes the valves and

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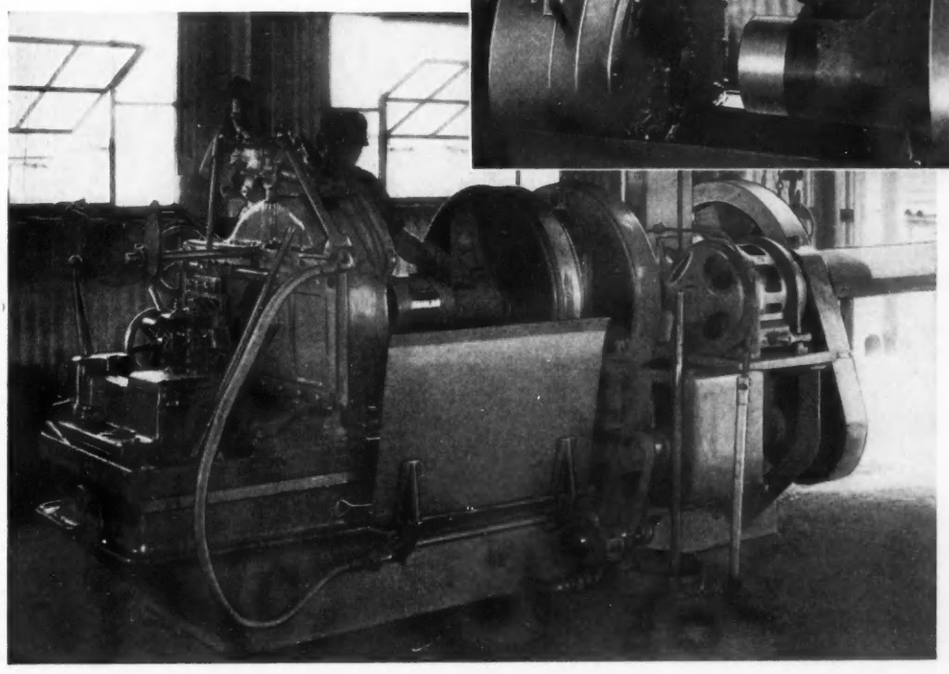

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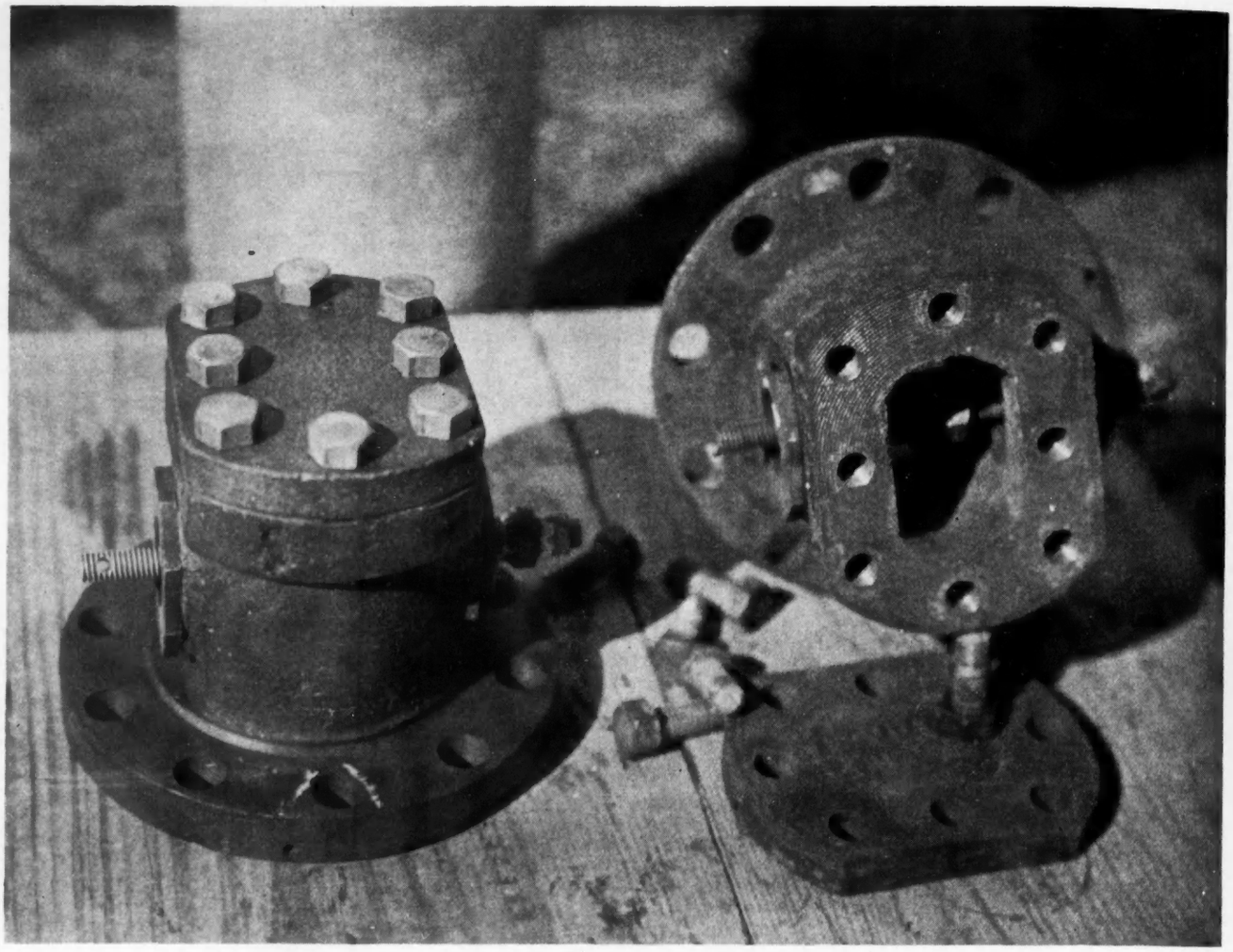

The broken stem on this regulator inlet bowl is of minor expense itself, but may occasion a shut down, and thereby become a liability. The stem here was drilled for a pin. A drop of oil now and then, or more care in adjusting could have saved shut down and replacement cost.

seats to become rough and pitted. When this happens it is necessary to re-seat the valves. Study of the regulated pressure charts will show when this condition exists. If, during normal periods of operation, the pressure holds constant and then starts to build up when the load decreases or is shut off, a person can be sure that for some reason the valves are not completely closing. When grinding valves, it is necessary that both the valves be fitted at the same time. This may seem an unnecessary precaution, yet attempted fitting of first one valve and then the other has been known to occur.

In passing judgment upon the ability of a regulator to completely shut off, it should be remembered that if hard seats are used, it is practically impossible to shut off all flow of gas. Where this is demanded of a regulator, soft seats must be used.

Working Parts May Bind

The second named cause of imperfect pressure regulation manifests itself in a different manner. Binding in any of the working parts of a regulator causes it to be insensitive to small pressure changes on the discharge side. Consequently, when the discharge rate is increased rapidly the pressure will drop several pounds before the enlarged friction of the bind is overcome and the valves open. They then open suddenly and gas passes through the regulator more rapidly than it would if the regulator were working properly. The pressure builds up too fast and the valves close. The result is a very uneven pressure.

The cause of binds is a misalignment of working parts. Either the valve guides are not true or they are corroded and dirty, or the valve stem is out of line or dirty and binding in its stuffing box. Paint on either the valve stem or the lever pin will have the same effect as a bind. Still another cause of sluggish regulators is an obstruction of the breather hole in the diaphragm case. This breather hole must be kept clean.

When a sticking or sluggish condition exists it is advisable to make a close inspection that the valve stem is straight and in perfect alignment with head and valve connections. If the valve stem has been bent and is binding, it should be replaced. Be sure that there is no paint on the stem or other working part. Repack the stuffing box with properly lubricated packing and do not tighten any more than is absolutely necessary.

Install Proper Size Head

The size of the head on a regulator is very important. Within limits, the larger the head the more sensitive the regulator to changes in the controlled

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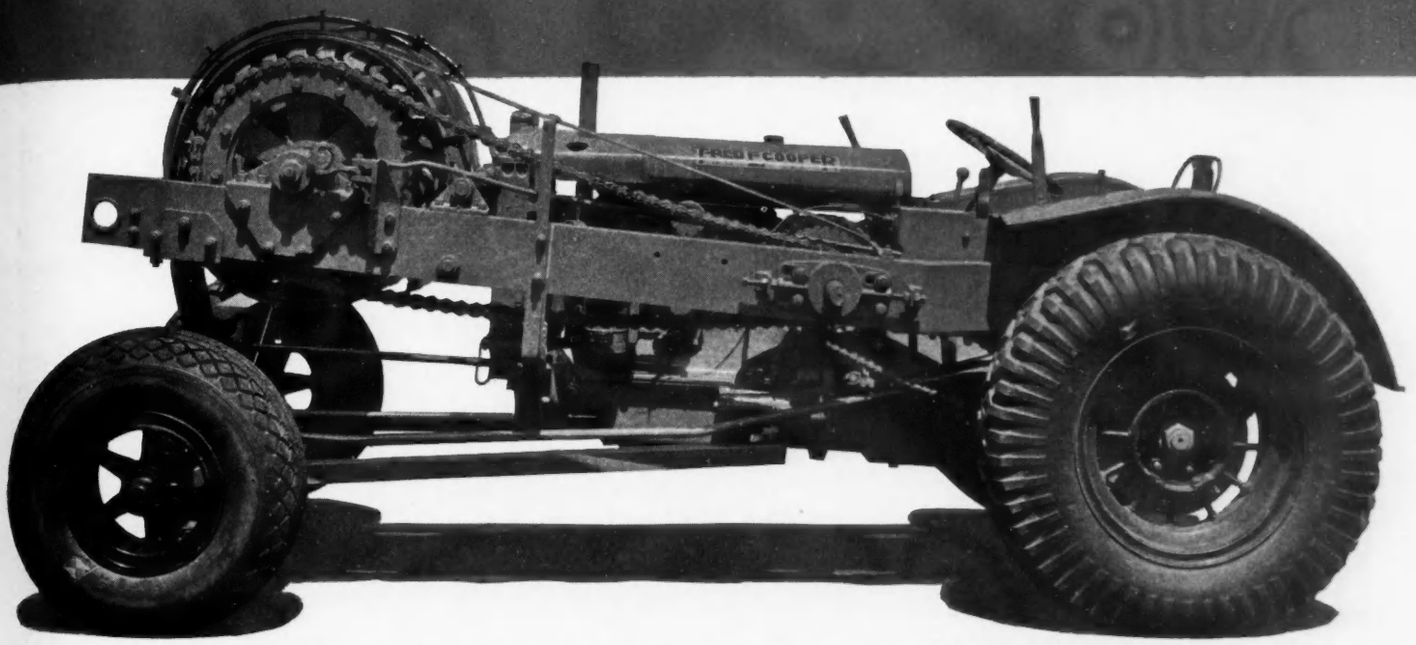
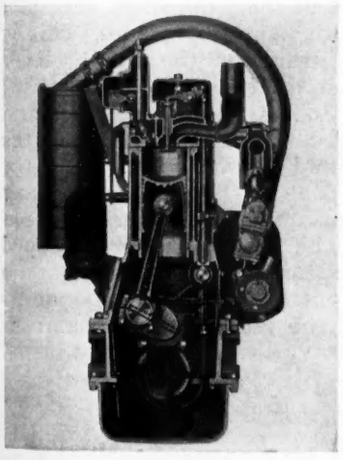


THE EVER POPULAR ALLIS-CHALMERS UM WINCH TRACTOR

This unit is available with either 15 or 30 m.p.h. road speeds. Is equipped with single or double drums, as desired, and may be had with telescope mast, spudding equipment and rotary sprocket.

SPECIFICATIONS A-C MODEL UM WINCH TRACTOR



High pressure lubrication system from gear driven pump to all main bearings, connecting rod bearings, camshaft bearings, piston pins, governor and rocker arms.

WINCH	TRANSMISSION	ENGINE
Line capacity—8,200' of ½", 6,870' of $\frac{9}{16}$", 5,250' of ⅝", 3,640' of ¾".	Four speeds forward and one reverse—selective type.	Four cylinder, 4½" bore, 5" stroke. Valve-in-head. Torque 200 ft. lbs. at 900 r.p.m.
BRAKES—Two 32" steel drums, 6" face. Special designed to force air circulation for cooling. Self energizing, fully equalized.	GEARS—Chrome-nickel steel heat treated and carburized. Extra heavy, wide face.	FUEL supply system—24 gal. tank, gravity feed, provided with visible sediment trap. 1½" special carburetor for gasoline fuel. Throttle opening controlled by governor.
DRUM SHAFT—3¼" fixed in cast steel brackets rigidly held against lateral movement and rotation.	SHAFTS—Heavy duty chrome-nickel steel. Bearings, heavy duty ball.	GOVERNOR—Built in, centrifugal type. Positive action, sensitive control. Range from 600 to 1,200 r.p.m. of engine.
DRUM DRIVE—Roller chain. Eight line speeds, from 48' to 1,072' p. m.	TRANSMISSION CASE—Fine gray iron. Unit power plant construction insuring perfect alignment of shafts and gears.	WATER capacity 6 gals. Impeller type pump circulates 35 gals. of water p.m. at governed operating speed of engine. Cools hottest part of engine first. Combustion chambers and exhaust valve seats completely surrounded by water.
DRUM—Mounted on heavy duty ball bearings, free rolling.		
All controls conveniently located, all parts can be removed without dismanteling any other part.	LUBRICATION—All gears and bearings run in an oil bath.	

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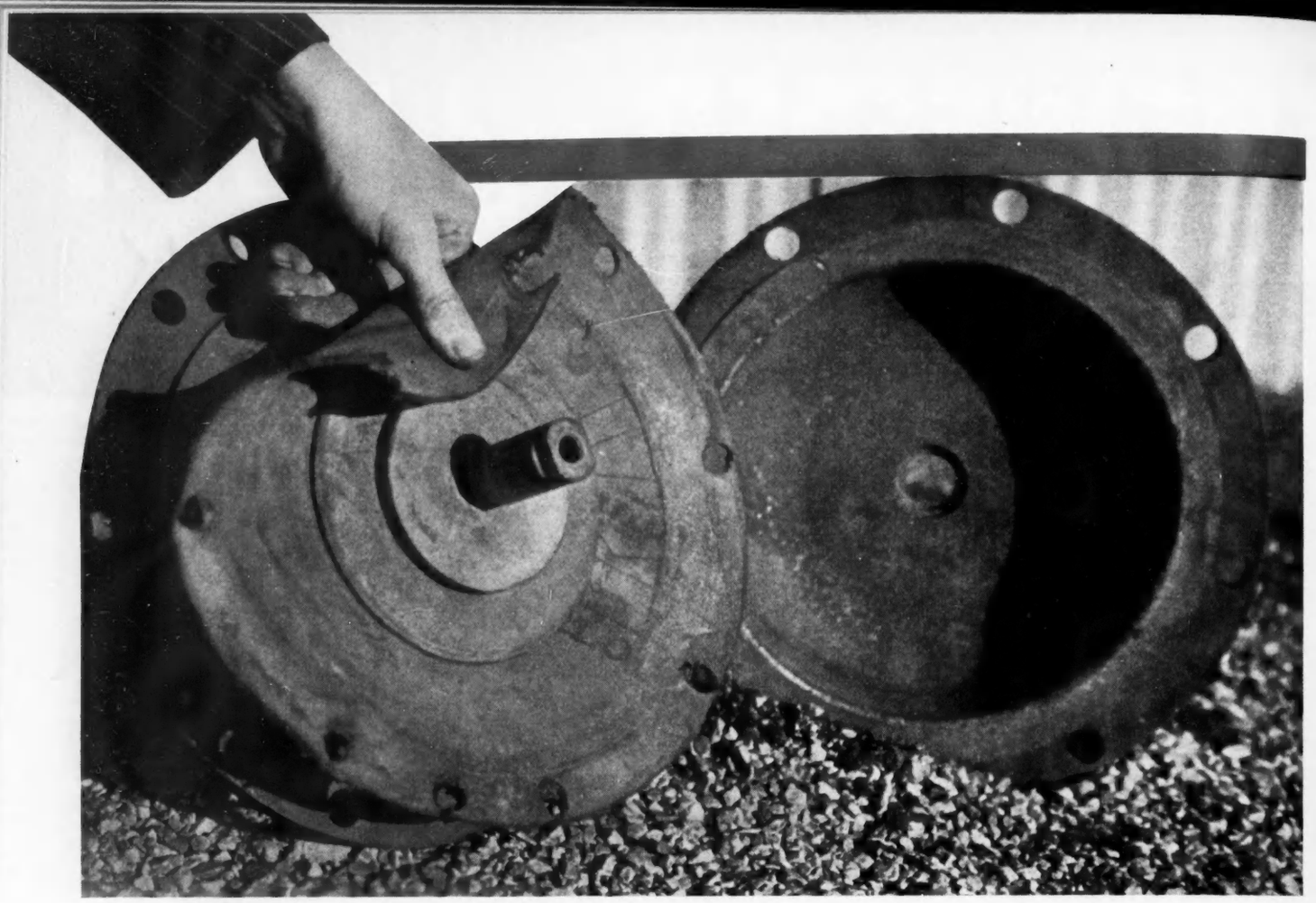

Diaphragms may become brittle through drying, and may crack; or may become deteriorated through contact with moisture. Operating fatigue can only make replacement necessary after long service, but it is necessary to inspect regulators frequently to assure correct pressures and continuous operation.

pressure. The smaller the head the greater the variation in discharge pressure which may be expected. Increased sensitivity with the use of a large head will not be obtained when, in order to maintain the desired outlet pressure, an excessive weight must be placed on the weight lever. This is an unwise practice because in addition to decreasing the sensitivity of the regulator, the lever pin may be sheared, the diaphragm bursted or the lever bent. When any of these things happen the regulator will not operate at all. In determining the size head to be used, it is advisable to follow the recommendations of the manufacturer.

The size of the head determines the diaphragm material which should be used. With high pressures and a small head, a heavier, less flexible diaphragm is used, and when the desired pressure is lower and a larger head is used, a more flexible material is needed. Use of a light material where high pressures are needed is dangerous because of its inability to withstand them. Heavy material used when lower pressures are desired lessens the responsiveness of the regulator to pressure changes and nullifies the use of the larger head.

Correct Installation Necessary

Correct installation of a diaphragm is necessary if a regulator is to work properly. If the diaphragm is too tight, pressure exerted upon it will not completely close the valves and will cause a result similar to improperly seating valves. When re-diaphragming a regulator, be sure that the valves and the weight lever are in a wide open position at the time the diaphragm is punched and bolted in the case.

Loose connections cause both uneven regulation and chattering in the regulator. A very little play in the connections between the valves and the stem causes a fluctuation in the outlet pressure. This is due to a "lost motion" travel in the weight lever before the valves lift from their closed position. This play also will permit a vibration of the valves and the valve will chatter up and down. Sometimes the valve guides fit loosely and allow a vibration of the valve that causes it to chatter. The first cause may be remedied by inserting a thin tin washer between the loose connections. The second may be stopped by spreading the valve guides slightly so that no lost motion there is permitted. This may be done by tapping the bottoms of the guides with a hammer. If the valve guides fit very loosely it is best to install new valves.

Stop Regulator Pumping

Under certain conditions of operation, regulators will "pump." This action is so called because of the regular up and down motion of the weight lever when it exists. This condition is most often found when successive pressure cuts are made with the regulator settings close together. Single regulators have been known to pump, however. Turbulent flow conditions are the cause of pumping. This turbulence causes an uneven pressure to be exerted upon the diaphragm, causing the valves to intermittently open and close. Several solutions for this problem have been suggested, and the use of any of them is a

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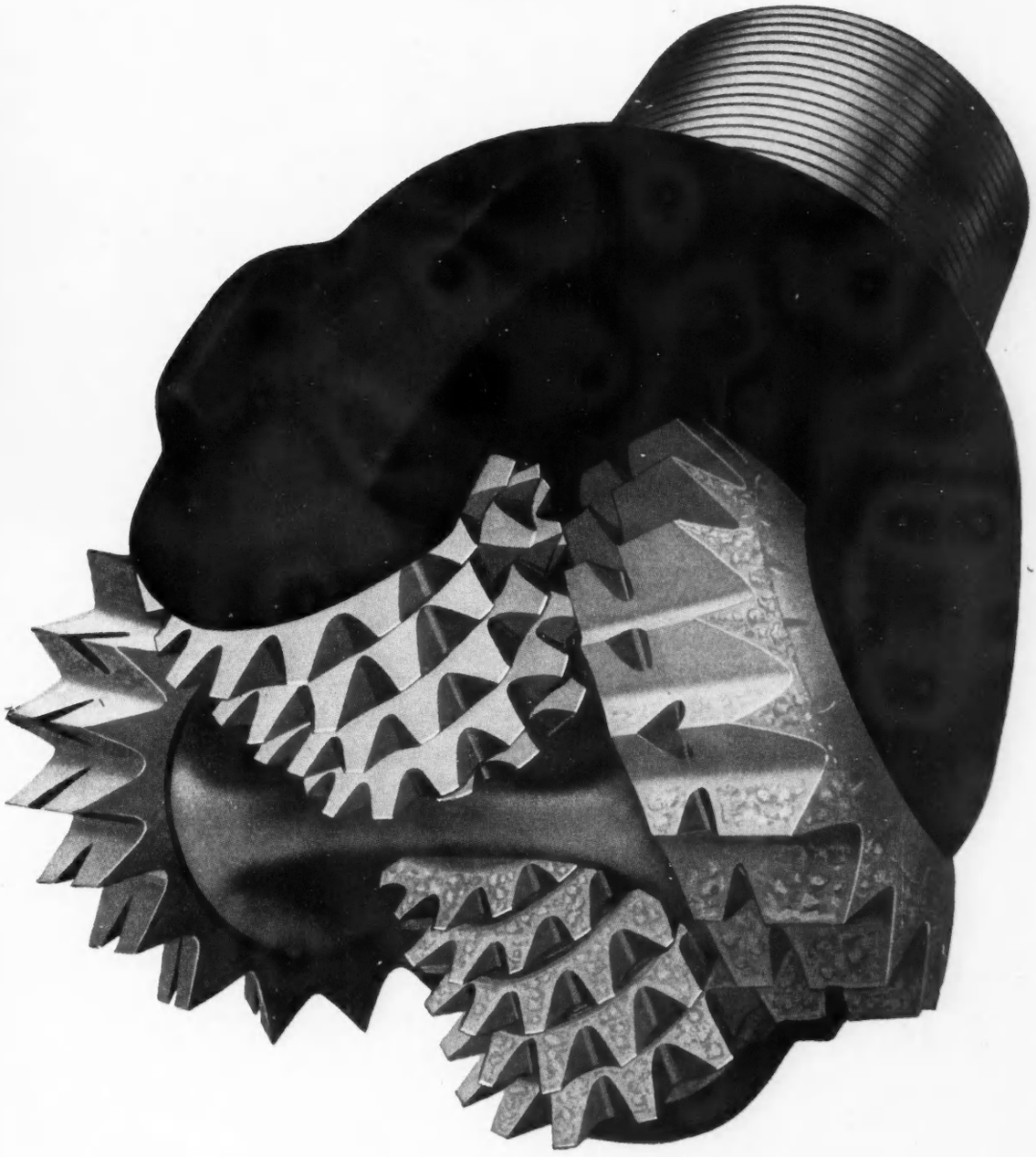

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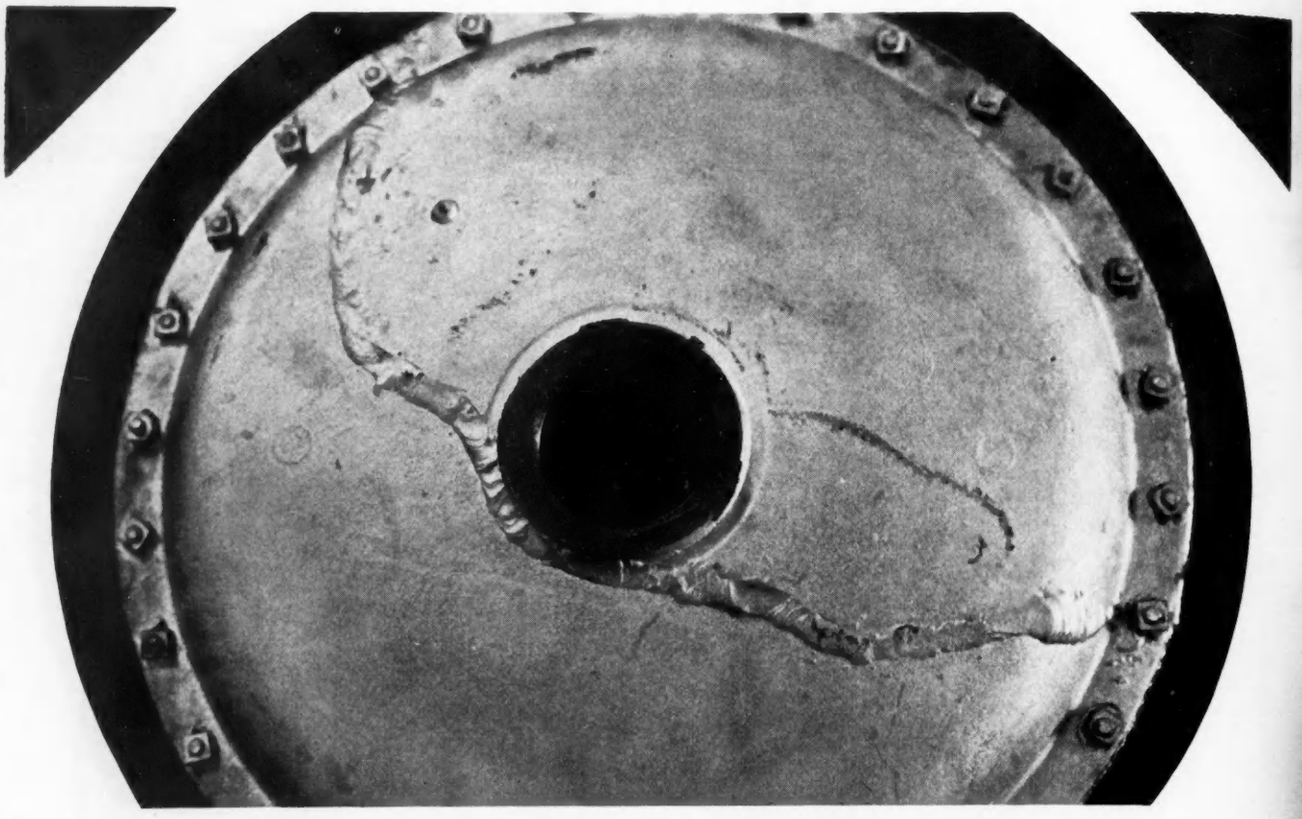

Diaphragm heads of regulators do not generally cause difficulty, or demand particular attention. In their installation, due to the number and spacing of bolts around the circumference, it is necessary to tighten the head evenly, otherwise the part may be broken.

matter of personal preference and successful application. Sometimes the pumping is eliminated by reducing the size of the restriction in the diaphragm piping. This lessens the responsiveness of the regulator to sudden pressure changes. Pumping is sometimes stopped by connecting the diaphragm piping a greater distance from the regulator. Changing the size of the head is sometimes a remedy. Still another method is the installation of a control disc in the line just beyond the diaphragm piping connections. This allows the gas to "pack up" and thus prevents surging tendencies. This control disc should be sufficiently large, however, that an excessive pressure drop across it does not occur at high rates of flow.

Another handicap to effective pressure regulation is that of freezing. As gas passes through a regulator it is cooled. When this cooling process reaches the point where liquids are condensed out of the gas, freezing occurs. This happens most often when a great difference exists in the inlet and outlet pressure. Ordinarily it is prevented by heating the gas before it goes into the regulator, so that the resulting expansion does not cool the gas to the point where freezing occurs. Freezing in the regulator causes a binding of the working parts, and the substitution of center valve guides will aid materially. Freezing may occur in the diaphragm piping, especially if there are any leaks in either the connections or the head. To prevent this it is essential that no leaks exist.

When regulators are inspected periodically and given the attention to which they are entitled, then they will give the satisfactory service and regulation that is claimed for them.

Reprints of the foregoing article are available at nominal costs by writing The Gulf Publishing Company, Houston, Texas.

Emulsified Oil Waste

Top—Emulsified oil waste, Eldorado, Kans., field.

Bottom—Emulsified oil waste, Cushing field, 1915.

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GAS-FIRED FURNACE HAS PROVEN ITS VALUE IN

Cleaning Line Pipe

By FRANK B. TAYLOR, Staff Writer

PRACTICAL economy in the re-use of previously used pipe depends upon the cost of removal from the old location, storage, and reconditioning. Except in cases where it is necessary to transport over extended distances, the reconditioning is the item of major expense. This cost is held to a minimum by Oklahoma Natural Gas Company through cleaning in a blast furnace at a point centrally located in the firm's Mid-Continent area of activity.

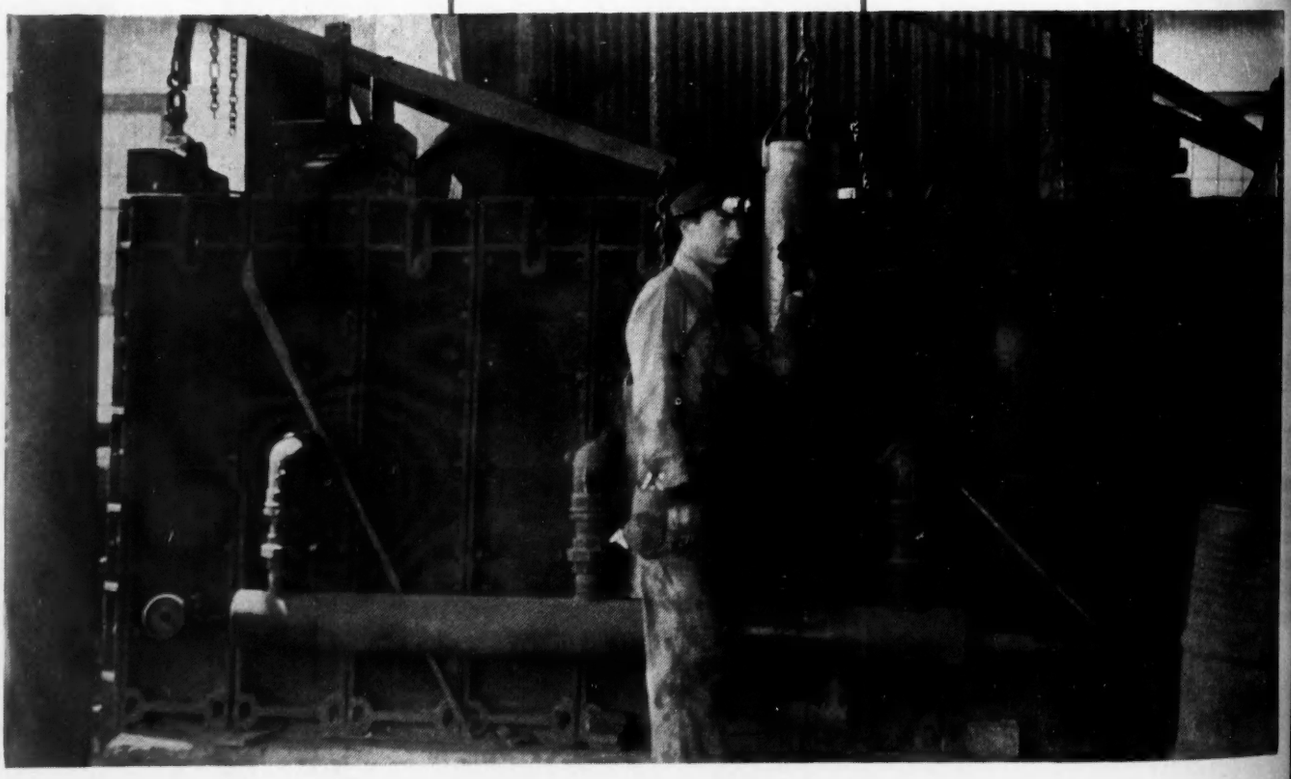
The furnace has been in use for a sufficient length of time to allow operators of the equipment to accurately judge its value and to determine the adaptability of this method of cleaning. From past records, it is shown that operation of the unit is not critical, that regular and sustained service does not make for costly upkeep, and that fuel costs are in line with the volume of pipe cleaned. Operating labor charges are generally low, depending more or less upon the size of the pipe that is being cleaned.

Side view of blast furnace constructed and used by Oklahoma Natural Gas Company at their central warehouse and yard, Tulsa, Oklahoma. Operator E. D. Rolen preparing to raise door by lifting counterbalance.

Manner of connecting outside plates of iron is evident in view. Air manifold is near bottom of furnace, with three jets indicated by three inch lines into box. The gauge at left of the manifold indicates the pressure of the gas used for fuel.

Furnace Construction

The installation of the furnace described was made in the general warehouse yard of Oklahoma Natural Gas Company's Tulsa



INDEPENDENCE

Drawn by Thomas Jefferson and signed by the American Continental Congress on July 4, 1776, the Declaration of Independence is one of the most important documents of all time.

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Fig. 1740 Gaso Duplex Piston Timken Bearing Power Pump, 54 to 250 Bbls.

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plant. Pipe racks, painting equipment and other paraphernalia for servicing used pipe is part of the layout. Arrangement of the various machinery is such that handling is seldom interrupted.

Outside dimensions of the furnace are approximately 14 feet in length, 8 feet in height and seven feet in width. The outside of the construction is reinforced iron, lapped and bolted. The interior wall is fire-resistant brick, penetrated in six locations by the jets. The center is a hollow square the length of the furnace. Doors at each end of the construction allow the pipe to enter or exit, and these are counterbalanced for ease of manipulation.

In the lower center of the furnace interior, and running the entire length of the unit, brick have been left out of the construction so that a vertical slot exists between the doors. This allows clearance for two carriages, upon which the pipe is supported. At the same time, this discontinuance of the fire wall would ordinarily result in extreme heat being generated below the pipe zone; but this is eliminated by air injected through the space left open.

Pipe is conveyed into and out of the furnace on small carriers that are mounted on a double rail spaced about 12 inches apart. Each of the two carriers is 30 inches in height and consists of a flat table with four roller bearing wheels on the rails, and with a center upright of pipe. Into the pipe upright is slipped a "Y" of steel, the lower part of the "Y" being only slightly smaller than the diameter of the pipe. As the spread of the "Y" is subject to heat at each treatment of a piece of pipe, it is necessary that they be replaced at intervals.

The track for carrying the pipe is 65 feet in total length, including that section which transverses the interior of the furnace. Each of the two carriers is spaced at a definite distance along the track by means of a chain. This chain is continuous, going to the end of the rail, and returning underground through a piece of buried pipe. At the end from which pipe is fed into the furnace, the chain is carried over a large sprocket which is hand operated.

Furnace Operation

Gas is controlled through manifolds located at each side of the body of the furnace. An outer shell carrying air and natural gas is injected through minor lines. The mixture is fed into the maw of the fur-

Before and after treatment in the blast furnace. The pipe to the left is badly scaled after being buried for five years. The pipe to the right shows the same piece after blasting and brushing. From the appearance of the cleaned section, it is evident that the surface will form a good bond with the ordinary protective coating.

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Barde Steel Co., Seattle, Wash., and Portland, Ore.
Star Drilling Machine Co., 550 Clinton St., Portland, Ore., and Akron, Ohio.
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CHESTER

STEEL CASING AND LINE PIPE

Eight-inch line pipe within the maw of furnace. The manner in which scale "pops" from the surface is noted near rear of fire box. The section above pipe, having three distinct ridges, is the door which is counterbalanced. Immediately below the pipe is the slot through which the pipe carriers travel. The rails and chain may be discerned beneath the furnace.

nace through 3-inch inlets, three to each side, and so spaced as to direct flame toward the pipe circumference. The pressure of the gas entering the installation is held between 15 and 22 pounds per square inch gauge. Air for mix is pressured in a 45-inch rotary blower driven by a 10 horsepower electric motor. This last mentioned equipment is housed in a separate structure to one side of the furnace.

Only a few minutes are required for the furnace to reach an operating temperature. As soon as the walls begin to show red, a length of pipe is placed from a rack upon the carriers, the door nearest the sprocket is opened and the joint of pipe is fed into the furnace. Scale and rust immediately begin to pop and lift from the surface of the pipe in huge blisters. The operators allow the pipe to remain within the flame until it approaches a slight degree of cherry-redness. Pipe is turned once or twice to assure highest heat to all sections.

When the operator is satisfied with the treatment, a time element which is largely determined through the experience of the operator, the door against which the pipe is resting is opened and the joint is then fed further into the furnace so that the section of the pipe not previously exposed to the flame is within the blast. A short exposure at this position and the pipe has been treated.

Removal of the joint is accomplished in a manner similar to that in which the pipe is fed into the machine. When the joint is back to the original position, it is immediately rolled upon a rack, and a large steel brush is used to scrape the scale and dirt from the surface of the pipe. On examination this material is found to be mainly a heavy oxide reduced from scale. If any paint was present on the joint, it is usually entirely absent, or found to be indicated only through a slight discoloration. It is considered that the majority of pipe scab is reduced through oxidation, although a fair portion can be seen to "pop" from the surface while under the influence of heat. This is due directly to the difference of coefficients of expansion of iron and scale, and is the same function noticed when a welding torch is placed near a badly rusted surface.

The brush used to remove the burned scale is semi-circular, formed to conform with the circumference of the pipe. Two long handles of one inch pipe allow operators to take a position at some distance from the hot joint. A single brushing is all that is necessary.

From the rack where the loosened scale is brushed from the pipe, the joints are rolled to another where they are treated with a first coat of paint. In this operation it is necessary to allow the pipe to cool only to a point at which applied paint or protective coating will not blister. Operators have determined that a coat applied to warm pipe forms a better bond than when applied cold, and that the time for drying of the coat is appreciably shortened.

Crews that have used heated pipe have informed engineers that they have found the pipe to lend itself quite readily to bending. Tests have indicated that the original strength of the material is not impaired through the application of heat, and it is believed that in some cases the reverse may be true. During treatment the heat produces bends in straight pipe that are very evident to the eye, but with cooling, these bends disappear and the pipe leaves the furnace as straight as it was when placed in the blast.

The installation illustrated is for any size pipe from two inches in diameter to twenty inches. Rails are not of sufficient length to allow treatment to be applied to an entire section of 40-foot length, and 20-foot joints are not treated in their entirety at the same time as the length of the furnace is only slightly over one-half that of a joint of pipe. Larger units are entirely practical from observations as to the operation of the described equipment.

During normal operation, 110 joints of eight inch pipe were treated in the equipment during an eight hour day. Larger joints require more time, and pipe of smaller diameter a corresponding decrease in time of treatment. Total volume of gas used, with furnace in continuous operation, approximates 2500 cubic feet per hour. This consumption is independent of the pipe diameter or time of joint treatment.

MEN IN THE INDUSTRY'S NEWS

EUGENE A. STEPHENSON ACCEPTS PETROLEUM ENGINEERING CHAIR AT UNIVERSITY OF KANSAS

» LEAVES THE MISSOURI SCHOOL OF MINES AND METALLURGY «

DR. EUGENE A. STEPHENSON, prominent for the past several years in the petroleum section of the American Institute of Mining and Metallurgical Engineers, recently left the Missouri School of Mines and Metallurgy at Rolla, where he was professor of petroleum engineering, to accept the chair of petroleum engineering for the University of Kansas at Lawrence.

Dr. Stephenson took his bachelor of science degree at Adrian College, Michigan, and his doctor's degree in geology at the University of Chicago in 1915. During the period of 1912 to 1916, he was instructor in economic geology at the University of Chicago.

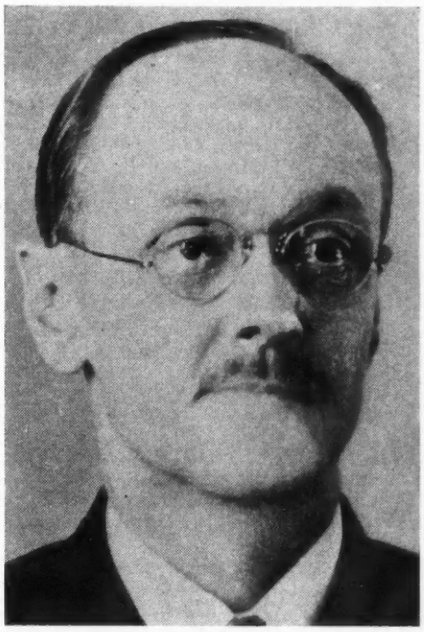
In 1917 Dr. Stephenson was made chief geologist for South Penn Oil Company of Pittsburgh, a position which he held until 1925. During this time he was in charge of the geologic petroleum engineering work of the company in Pennsylvania, West Virginia, Kentucky, Texas and Mexico.

In 1925 he became associated with Ralph E. Davis, Incorporated, of Pittsburgh and New York, an affiliation which continued for five years. During this time he had an active and varied experience with engineering problems in most of the important oil and gas fields of the United States, Mexico and Canada.

In 1930 Dr. Stevenson resigned from Davis' organization to become professor of petroleum engineering at the Missouri School of Mines and Metallurgy at Rolla, a position which has been held for seven years.

Dr. Stevenson has taken an active part in the American Institute of Mining and Metallurgical Engineers, and for the past five years has been secretary-treasurer of its petroleum division. He has also engaged in an extensive consulting practice, especially in Louisiana, Texas, and Oklahoma. He is a member of the American Association for the Advancement of Science, the American Association of Petroleum Geologists, Sigma Xi, Missouri Academy of Science and the American Gas Association.

Addition of Dr. Stephenson to the University of Kansas staff is a part of an extensive program of development which seems to be demanded by the growing importance of oil and gas in the state. The curriculum will recognize the necessity of thorough training in the fundamental sciences on which all progress in petroleum engineering must be based. Also experimental work will be carried on which will deal with problems of importance to both the industry and the state, such as salt water disposal and stimulation of production.



EUGENE A. STEPHENSON

J. C. BURKS, vice president and manager of O. C. Field Gasoline Corporation, is the newly elected president of the California Natural Gasoline Association, succeeding R. D. Gibbs of Union Oil Company.

Burks graduated in chemical engineering from California Institute of Technology, whence he continued his education after two years at Stanford University. His graduation from Cal Tech took place in 1923, and since that time he has been continuously with the O. C. Field Gasoline Corporation, excepting a short time spent in the heavy artillery during the war. For several years he has managed the gasoline operations of his company at Huntington Beach, and its oil producing and refining interests in the Santa Maria Valley.

H. R. Linhoff, manager of operations for Signal Hill Gasoline Company was appointed vice president of the California Natural Gasoline Association.

J. C. BURKE

EDWIN B. COX, of the partnership Edwin B. Cox & Jake L. Hamon of Ardmore, Oklahoma and Dallas, Texas, accompanied by Mrs. Cox will sail on the "Queen Mary" from New York July 7 for a short tour of Europe. They will return on the "Normandie" to New York about September 1.

GEORGE W. LaPEIRE, formerly chief geologist for United Fuel Gas Company at Charleston, West Virginia, has established consulting geological offices at Robinson, Illinois.

JOSE DE D. ILLERA of Barranquilla, Colombia, who has always taken an active interest in development of his country's petroleum resources, is visiting in New Jersey.

K. M. WILLSON, formerly district geologist for Mid-Continent Petroleum Corporation at Shreveport, has been appointed chief geologist for the company and maintains headquarters in Tulsa.

R. L. MARSTON, production superintendent for Sun Oil Company in the Rio Grande City district, Southwest Texas, has been temporarily transferred to Aberdeen, Washington, to supervise the drilling of a deep wildcat near Forks, Washington. Two rotary crews, including O. E. Pipkin and C. E. Tucker, drillers, all formerly employed by the company in East Texas field, will be used on this project. R. C. Eubank, production foreman at Mirando, will succeed Marston at Rio Grande City.

FELIX MENDOZA, native of Bogota, Colombia, and post graduate student of the University of Oklahoma, has been engaged by Magnolia Petroleum Company for petroleum engineering duty in the Fitts field, Oklahoma, for the remainder of the summer.

CHARLES R. KELLY, foreman of the Prieto Terminal of Mexican Gulf Oil Company at Tampico, Mexico, is spending a vacation with relatives in Texas. He is accompanied by Mrs. Kelly and son Robert.

J. ELMER THOMAS, well known in geological circles in the United States, left Paris at the close of the Second World Petroleum Congress June 19 to attend the Seventeenth International Geological Congress in Moscow, U.S.S.R.

L. A. BUSHE has been appointed assistant manager of Apex (Trinidad) Oilfields, Limited, succeeding H. D. Fletcher, who was recently appointed manager of the company, succeeding Lieut. Col. H. C. B. Hickling, retired.

DR. E. H. SELLARDS, economic geology department of the University of Texas, discussed "Certain Phases of the Geologic History of Texas" before members of the Panhandle Geological Society meeting at Amarillo last week.

FLOYD M. AYERS, geologist for Gulf Oil Corporation in West Texas district, with headquarters at Midland, has resigned to accept foreign service with Nederlandsche Koloniale Petroleum Maatschappij in Sumatra and New Guinea.

GEORGE F. COLLINS, purchasing agent of Compania Explotadora de Petroleo "La Imperial" S. A. at Tampico, Mexico, is on vacation in Texas.

L. C. "PAT" KEELEY, geologist in the Tampico, Mexico, office of Mexican Gulf Oil Company, and Mrs. Keeley, are spending a vacation with relatives in Texas and Wisconsin.

W. FRANK PENDERGAST, Toronto, assistant to the president of Imperial Oil Company, Limited, was a business visitor in Calgary, Alberta, last week.

F. M. HOOVER, geologist with Empire Oil & Refining Company, talked on the geology of southern Oklahoma June 28 before the Oklahoma City Geological Society.

PAUL WEAVER, head of the geophysical department of Gulf Oil Corporation at Houston, spoke July 1 at the weekly meeting of the Houston Geological Society on heaving shale wells at Old Hackberry dome southern Louisiana, and their relation to production.

BRIGADIER GENERAL JAMES STEESE, president of Guajilla Corporation, San Antonio, Colonel E. O. Thompson of the Texas Railroad Commission, and Mrs. Thompson, and H. F. Worley, Tulsa, were aboard the Steamship Bremen June 27 enroute New York from Paris, where they attended the Second World Petroleum Congress in June.

HUGH MARONEY, for several months past cashier at Oficina, Venezuela, for Mene Grande Oil Company on his return from the United States will be in the general offices of the company at Maracaibo.

CHARLES R. SCHULTZ, accounting department, Mene Grande Oil Company at Maracaibo, Venezuela, is in Houston, recuperating from a serious operation.

J. J. QUOYESER, assistant manager of Mexican Sinclair Petroleum Corporation, at Tampico, Mexico, has returned to headquarters after a brief trip to San Antonio.

DIED:

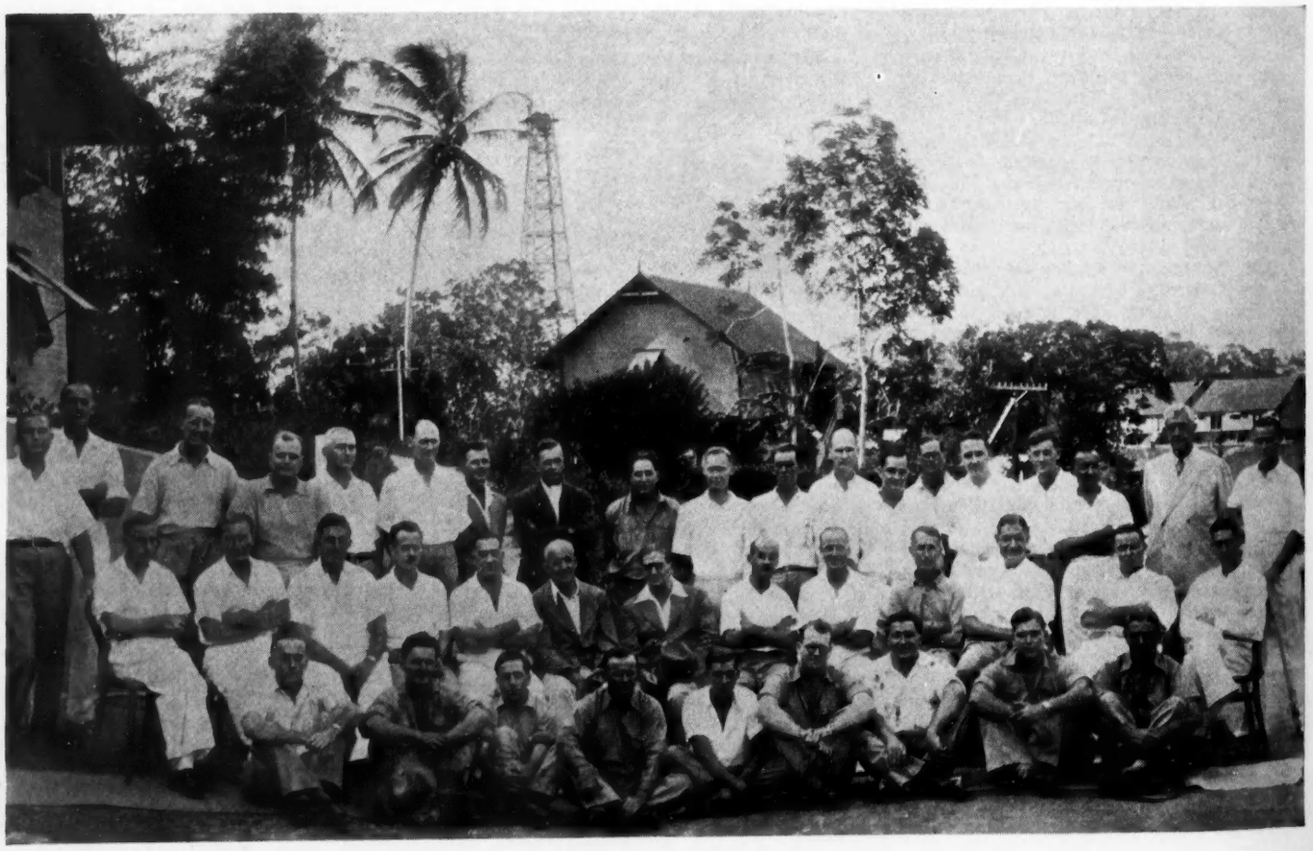
CECIL B. RAINS, 35, West Texas drilling contractor with headquarters at Midland, died June 27 in a Pecos hospital from injuries received June 23 in an automobile accident near Pecos. Following funeral services at Midland, the body was forwarded to Stillwater, Oklahoma, for burial. He is survived by his wife, two daughters and two sons.

JACK PORTEOUS, 24, foreman of Griffith Machine Depot, Ltd., Calgary, Alberta, died June 19 shortly after an oil derrick collapsed on him while pulling casing at Many Island Lake, 26 miles northeast of Medicine Hat, Alberta. Surviving are his widow, his parents, two sisters and four brothers.

CHAUNCEY FRANCIS PEASE, 23, employee of Otis Eastern Service, died of suffocation following an accident at J. N. Good 1, being drilled near Sissonville, West Virginia, by Godfrey L. Cabot Gas Corporation. Surviving are his widow, his father and two sisters.

WILLIAM H. CRAMER, 65, prominent in the development of the Wayne County, Ohio, field several years ago, died recently at Newark following a heart attack. Surviving are his widow and a daughter.

DOUGLAS WILLIAMS, scout for Humble Oil & Refining Company in the Corpus Christi district, died June 30 in Houston.



Party honoring the occasion of the recent retirement of Lieut. Col. H. C. B. Hickling, C.B.E., D.S.O., M.C., manager of Apex (Trinidad) Oilfields, Limited, since 1919, and the appointment of H. D. Fletcher to succeed Hickling. The following personnel of the company appears in the picture: Back row, left to right: G. W. Robinson, D. S. Treble, A. F. Castle, E. G. Rooks, T. M. Herries, J. Burslem, R. I. Maclachlan, C. L. Stoute, L. M. Berry, H. W. Reid, J. Y. Rountree, F. G. Burslem, H. C. Hobson, S. S. Scott, A. C. Packer, M. A. Rust, J. Bushell, J. A. A. Kernahan, F. R. Wellings. Seated, left to right: J. Murray, L. S. Henzell, M. A. K. Murray, R. A. Adamson, H. A. Herris, H. D. Fletcher H. C. B. Hickling, L. A. Bushe, A. P. Till, A. H. Richard, G. H. Scott, A. H. Baker, C. J. Miller. Front row, left to right: K. D. Macgillivray, C. S. McMullen, G. Lynch, A. J. Pounds, D. J. Philipps, H. Costelloe, J. W. Knights, L. R. de Verteuil, C. C. Marks.

Outlook Promising

PRICES FIRM WITH PROSPECT OF RUNS HOLDING TO DEMAND

THE industry's markets appear steadier generally than a week ago, and the outlook is promising.

Prices are mostly unchanged from a week ago, and are comparatively firm.

Encouragement has been offered by the prospect that crude oil production will be balanced closely with market requirements for another month, under the July allowables of the states.

The control of output will be about equally strict in July as in June, when production was virtually in balance with demand. In the first three weeks of June, only about a million barrels of crude went into storage; whereas the four preceding months had brought storage additions of about that much per week.

Aside from the July allowables situation, some other factors have been of a cheerful nature.

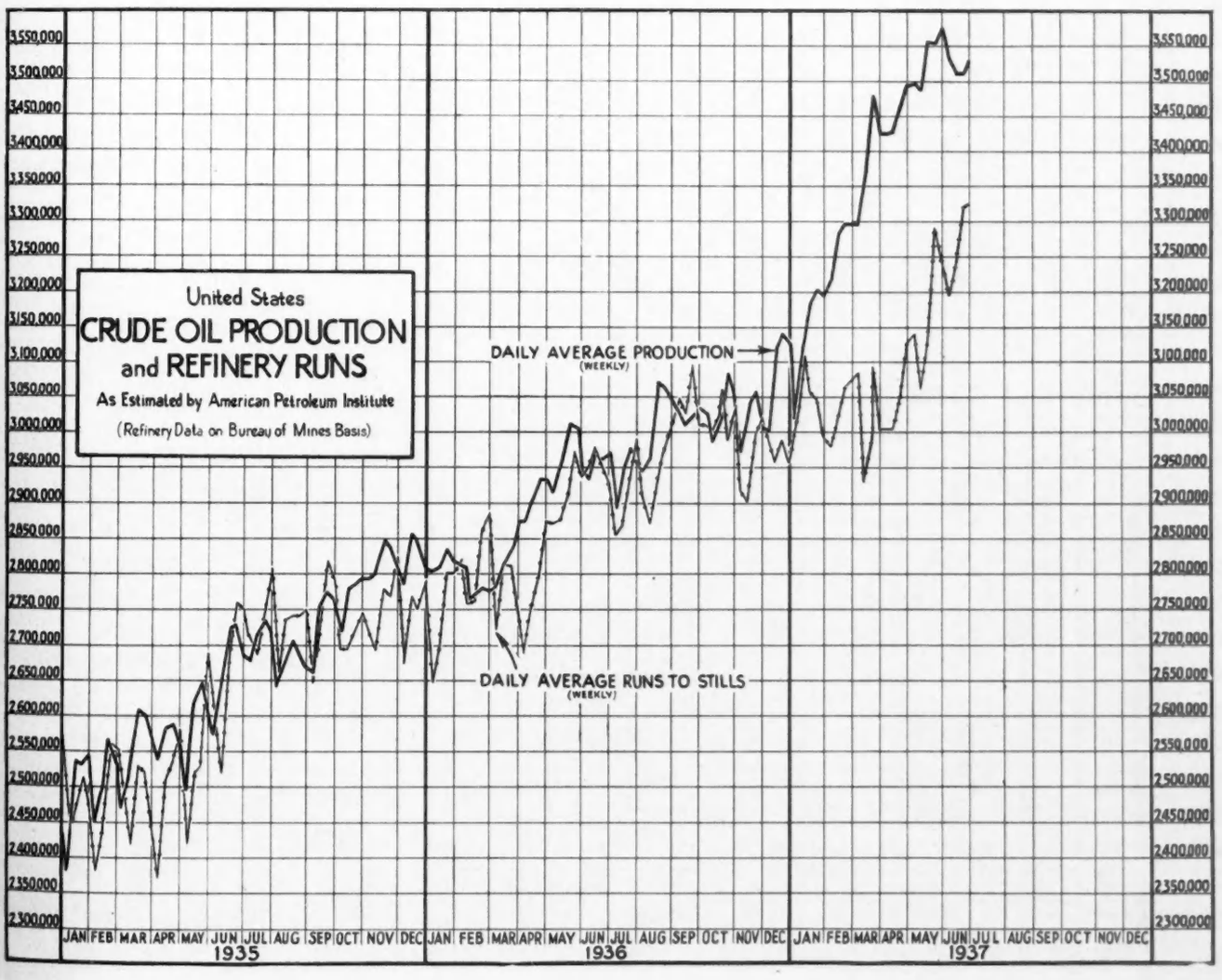
The latest report on gasoline stocks, for instance, showed that 1,147,000 barrels of finished and unfinished gasoline came out of storage in the week ended June 26, as demand continued heavy. The stocks of gasoline after that decline were down to 75,427,000 barrels, a level about 8,000,000 barrels below the all time peak that was set March 27.

The present gasoline inventories are 10.2 percent larger than a year ago. But such an increase is justified by the gain that has occurred in gasoline consumption. The demand has been running around 10 percent higher this year than last year, and for July it is estimated by the Bureau of Mines that an increase of 12 percent will be shown.

Fuel Market Strong

Similarly, the latest information on gas and fuel oil stocks is encouraging. The total inventories of those oils on June 26 amounted to 100,395,000, which was about 5,000,000 barrels less than the 105,285,000 barrels held one year previously. While the stocks are lower, the demand has been running substantially higher this year than last year. This inventory situation naturally is promoting a strong market for fuel oil, and it indicates that attractive prices will prevail in the heavy consuming season next fall and winter.

The satisfactory inventory position with regard to refined oils is being



maintained, moreover, as refinery operations continue in line with market requirements. In the week ended June 26 runs of crude oil to stills were cut back 85,000 barrels to an average of 3,235,000 barrels daily.

Crude Stocks Higher

The latest information on crude oil stocks reflected the relatively effective balancing of crude production with demand, as the stocks for the United States showed only a small increase of 266,000 barrels, rising to 307,465,000 barrels. Although the crude stocks are substantially higher than at the beginning of this year, they nevertheless are lower than at this time last year, when storage aggregated 311,360,000 barrels. While the stocks thus are lower the demand for petroleum has been around 10 percent higher this year than last year. Therefore, the crude storage situation is better now than at this time last year.

Complete table of prices paid for crude oil at the well in principal fields will be found on page 58. Hereafter this schedule will appear only in the first issue of each month.

Prices of gasoline and kerosene at Mid-Continent refineries last week continued mostly unchanged.

U. S. motor gasoline f.o.b. Oklahoma refineries late last week ranged from 5 to 5¼ cents a gallon for the 62 octane and below, 5⅜ to 5⅝ cents for the 63 to 67 octane, and 6 to 6¼ cents for the 68 to 70 octane material.

Corresponding prices in the Chicago market were: 4⅞ to 5¼ cents, 5¼ to 5½ cents, and 5¾ to 6⅛ cents.

In East Texas the usual 60-62, 400 end point gasoline was priced at 5¼ cents a gallon.

Kerosene prices f.o.b. Oklahoma refineries ranged from 4⅛ to 4¼ cents a gallon for the 41-43 water white grade and from 4¼ to 4½ cents for the 42-44 water white grade. In the Chicago market the prices of both grades were one eighth cent a gallon lower than in the Oklahoma market.

Weekly Trends of United States Production and Stocks

(Figures American Petroleum Institute, except Crude Stocks, Bureau of Mines)

WEEK ENDED	Crude Oil Production (Barrels Daily)	Crude Runs to Stills (Barrels Daily)	Crude Oil Stocks (Barrels)	Gasoline Stocks (Barrels)	Gas & Fuel Oil Stock (Barrels)
January 2, 1937	3,121,400	3,030,000	287,659,000	62,661,000	106,330,000
January 9	3,117,800	3,110,000	286,912,000	65,402,000	105,971,000
January 16	3,184,650	3,045,000	286,044,000	66,559,000	104,841,000
January 23	3,205,150	3,055,000	285,211,000	68,180,000	103,441,000
January 30	3,194,050	2,995,000	285,384,000	69,540,000	102,078,000
February 6	3,220,750	2,980,000	286,116,000	70,535,000	101,136,000
February 13	3,286,050	3,020,000	286,158,000	73,585,000	100,735,000
February 20	3,295,950	3,065,000	287,574,000	74,798,000	99,391,000
February 27	3,296,100	3,085,000	288,121,000	78,786,000	99,534,000
March 6	3,298,800	2,930,000	289,611,000	80,102,000	99,115,000
March 13	3,372,850	2,985,000	290,613,000	81,236,000	98,964,000
March 20	3,448,150	3,095,000	291,555,000	81,623,000	97,287,000
March 27	3,431,300	3,060,000	293,587,000	*83,538,000	96,591,000
April 3	3,422,350	3,005,000	297,374,000	83,157,000	95,805,000
April 10	3,426,300	3,005,000	297,468,000	82,579,000	94,581,000
April 17	3,463,550	3,055,000	298,932,000	82,703,000	94,472,000
April 24	3,496,400	3,125,000	300,737,000	82,303,000	94,100,000
May 1	3,497,450	3,140,000	303,249,000	81,407,000	94,291,000
May 8	3,489,200	3,065,000	304,148,000	81,469,000	94,874,000
May 15	3,551,950	3,135,000	305,365,000	80,378,000	95,316,000
May 22	3,550,450	*3,290,000	304,971,000	79,827,000	95,111,000
May 29	*3,573,000	3,245,000	306,445,000	78,758,000	96,139,000
June 5	3,538,150	3,195,000	307,223,000	77,494,000	97,402,000
June 12	3,515,900	3,250,000	307,199,000	76,996,000	98,158,000
June 19	3,510,950	3,320,000	307,465,000	76,574,000	99,215,000
June 26, 1937	3,529,600	3,235,000	.....	75,427,000	100,395,000
June 27, 1936	2,969,150	2,930,000	311,360,000	68,441,000	105,285,000

* All-time peak.

Summary of Wells Completed in the United States Week Ending July 3, 1937

	Completions	Oil Wells	Gas Wells	Failures	Initial Production	Total 1937	Total this Date 1936
Alabama	....	....	....	....	.....	1	2
Arkansas	3	1	....	2	607	44	46
California	27	21	....	6	15,410	692	577
Colorado	....	....	....	....	.....	6	6
Florida	....	....	....	....	.....	....	1
Illinois	....	....	....	....	.....	59	4
Indiana	....	....	....	....	.....	58	121
Kansas	50	34	5	11	46,823	1,253	806
Kentucky	13	8	5	....	106	144	125
Louisiana	21	12	1	8	5,939	423	531
Michigan	25	17	....	8	10,820	438	384
Mississippi	....	....	....	....	.....	6	5
Montana	....	....	....	....	.....	76	67
Nebraska	....	....	....	....	.....	....	.....
New Mexico	9	7	1	1	1,267	358	282
New York	....	....	....	....	.....	6	.....
Ohio	23	5	10	8	131	726	976
Oklahoma	51	37	1	13	28,675	1,571	1,462
Pennsylvania	4	1	2	1	15	85	....
Texas	288	229	7	52	351,396	7,521	6,278
Utah	....	....	....	....	.....	....	.....
West Virginia	7	....	5	2	.....	442	365
Wyoming	....	....	....	....	.....	53	29
Total this week	521	372	37	112	461,189	13,962	12,067
Total last week	616	432	47	137	474,185	....	.....
Total this year	13,962	9,657	1,124	3,181	11,788,907	....	.....

26 TANKERS BUILDING

New Jersey Standard Oil leads with 61,500 tons

Washington, D.C.—Twenty-six tankers having gross tonnage aggregating 194,132 tons are under construction for major oil companies headquartered in the United States, according to figures compiled by the bureau of marine inspection, department of commerce.

Standard Oil Company of New Jersey is having 11 tankers built. Of these two are of 7500 tons each, two are of 7200 tons each, four are of 7550 tons each, one is of 1700 tons, and two are of 7300 tons each, giving that company a total tanker tonnage under construction equal to 61,500 tons.

The Texas Company takes second place in the matter of tanker tonnage under construction. It is building four tankers having a total tonnage of 32,500. Of this, one tanker represents 7300 gross tons, whereas three others of 8400 tons each represent 25,200 gross tons.

Gulf Oil Corporation is having built two tankers of 7141 tons each; Socony-Vacuum Oil Company, Ltd., one of 7300 tons; Pan American Petroleum & Transport Company, one of 7450 tons; American Tankers Corporation, one of 1500 tons; Standard Oil Company of Indiana, one of 5000 tons; Atlantic Refining Company, one of 11,000 tons and one of 11,600 tons; Standard Oil Company of California, two of 8000 tons each, and Sun Oil Company, one of 11,600 tons.

Comparison of Permits Granted for New Wells

STATE	Week Ending July 3	Total this Mo.	Total this Year	Total this Date Last Year	1936 Year Total
Arkansas	10	10	106	52	103
California	27	27	799	496	1,054
Louisiana	36	36	636	623	1,107
Kansas	56	56	1,354	902	1,873
Michigan	12	12	505	361	762
Oklahoma	46	46	1,522	1,519	2,594
Texas	457	457	9,422	7,606	15,582
Total	644	644	14,344	11,559	23,075

Production Steady

SLIGHTLY LOWER OUTPUT NEARER CURRENT DEMAND

UNITED STATES crude oil production in the past week, ended July 3, showed only a slight change from the level of the week before, averaging 3,511,650 barrels daily. That was 4700 barrels a day less than in the previous week, and 175,650 barrels a day more than the Bureau of Mines estimate of demand for June.

The output was less excessive, however, when compared with the indicated demand for July, into which month the week overlapped.

The slightly lower output last week resulted from declines in Oklahoma, Kansas, and New Mexico, that outweighed small increases in Texas, Louisiana, and California.

Oklahoma last week averaged 619,600 barrels a day, or 12,475 barrels a day less than in the previous week and 5700 barrels daily less than the Bureau of Mines recommendation for output in June.

Kansas production was down 6025 barrels at 193,000 barrels a day, and was 2300 barrels a day above the indicated demand.

New Mexico showed a decline of 100 barrels in averaging 114,500 barrels a day. That was 12,500 barrels daily more than the Bureau of Mines estimate of demand.

Texas last week averaged 1,405,800 barrels daily, which was 9800 barrels a day more than in the previous week and 51,800 barrels a day more than the Bureau of Mines recommendation.

Louisiana output rose 2900 barrels to 262,250 barrels daily, and was 10,250 barrels a day above the indicated market demand.

California averaged 656,000 barrels daily, or 700 barrels a day more than in the previous week and 70,100 barrels a day more than the Bureau of Mines recommendation.

Runs to stills reach new high in April

Washington, D. C.—Continuing the now monotonous tale of new records, daily average runs to stills in April reached a new high at 3,119,000 barrels, an increase of 74,000 barrels over March and 301,000 barrels more than in April, 1936, it was reported by the Bureau of Mines.

Total runs to stills for the month were 93,573,000 barrels.

The bureau's monthly refinery report showed that total receipts of crude at refineries in April were 97,966,000 barrels, of which 95,352,000 barrels were domestic and 2,614,000 barrels foreign, the latter averaging 87,000 barrels a day, an increase of 21,000 barrels over March. Fuel and losses for the month were 254,000 barrels.

As a result of the heavy receipts, stocks increased 4,139,000 barrels during the month, from 49,190,000 barrels April 1 to 53,329,000 barrels April 30, the bureau reported.

Pays $300,000 for two leases

Pampa, Texas.—Shell Petroleum Corporation has acquired P. L. Hoffman and associates' two producing leases in Gray County, involving nine wells on 240 acres with an allowable of 232 barrels daily, for $300,000. The consideration is one-half cash, and balance payable from production. The deal covers the B. E. Finley 160-acre lease, B. F. Chaney Survey, with eight wells, and the Saunders 80-acre lease with one producer.

United States Crude Oil Production

Estimates Compiled by The OIL WEEKLY

DISTRICT OR STATE	Bureau of Mines Recommendation (Daily in June)	ACTUAL PRODUCTION: BARRELS DAILY FOR WEEK ENDING	
		July 3	June 26
TEXAS—			
Texas Panhandle	.....	83,600	84,300
North Texas	.....	72,900	72,400
West Central Texas	.....	33,200	33,100
West Texas	.....	197,700	195,700
East Central Texas	.....	122,800	120,800
East Texas Field	.....	466,600	466,100
South Texas	.....	232,600	232,100
Texas Gulf Coast	.....	196,400	191,500
Total Texas	1,354,000	1,405,800	1,396,000
OKLAHOMA—			
Oklahoma City	.....	140,575	147,075
Seminole Area	.....	123,650	122,950
Crescent	.....	8,000	9,850
Lucien	.....	15,750	15,500
Fitts	.....	91,500	93,500
Edmund	.....	19,250	20,500
Moore	.....	13,500	14,750
Others	.....	207,375	207,950
Total Oklahoma	625,300	619,600	632,075
KANSAS—			
Ritz-Canton	.....	5,625	5,625
Chase	.....	8,300	9,650
Hollow-Nikkel	.....	2,850	2,875
Sedgwick	.....	4,375	4,350
Burrton	.....	14,225	14,475
Lorraine	.....	4,700	5,000
Russell County	.....	31,850	30,850
Silica	.....	17,650	20,100
Others	.....	103,425	106,100
Total Kansas	190,700	193,000	199,025
LOUISIANA—			
North Louisiana	.....	87,150	85,050
South Louisiana	.....	175,100	174,300
Total Louisiana	252,000	262,250	259,350
ARKANSAS	28,300	29,100	28,600
CALIFORNIA—			
Long Beach	.....	60,000	59,800
Santa Fe Springs	.....	44,200	45,100
Huntington Beach	.....	39,000	38,200
Dominguez	.....	15,600	25,900
Inglewood	.....	14,500	14,200
Ventura Avenue	.....	35,700	34,800
Seal Beach	.....	9,000	9,300
Midway-Sunset	.....	79,600	73,500
Elwood	.....	9,100	9,100
Kettleman Hills	.....	82,000	79,300
Mountain View	.....	19,000	18,400
Playa del Rey	.....	8,500	8,700
Wilmington	.....	40,000	42,400
Others	.....	189,000	196,600
Total California	585,900	656,000	655,300
MOUNTAIN STATES—			
Wyoming	51,000	49,200	46,600
Montana	15,400	17,400	17,400
Colorado	4,800	4,500	3,800
Total Rocky Mountain States	71,200	71,100	67,800
NEW MEXICO	102,000	114,500	114,600
EASTERN STATES	118,200	117,600	121,200
MICHIGAN	38,400	42,700	42,400
Total United States	3,366,000	3,511,650	3,516,350

CRUDE OIL PRICE SCHEDULES

(Figures Revised to July 2, 1937)

MID-CONTINENT GRAVITY SCALE PRICES (Posted January 28, 1937)

(Some fields of Mid-Continent have flat price postings, and are shown separately.)

Gravity	Okla.-Kans.	North La.-Ark.	Rodessa, La.-Tex.	North & W. Cent. Tex.	East Cent. Tex.	Gray Co. Tex.	Carson Hutchinson Co. Tex.	[1]Conroe, Tex. Type	West Tex.-N. Mex.	[2]Gulf Coast (Tex.-La.)	[3]Some La. Gulf Areas	[4]Anahuac, Tex. Type	[5]Refugio, Tex. Type	[6]Mirando, Tex. Type
17–17.9	.....	.....	.....	.....	.....	.....	.....	.....	.....	*$0.90	.....	.....	.....	.....
18–18.9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.92	.....	.....	.....	.....
19–19.9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.94	.....	.....	.....	.....
20–20.9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.96	*$0.90	.....	*$0.95	*$0.90
21–21.9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.98	.93	.....	.98	.93
22–22.9	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.01	.96	.....	1.01	.96
23–23.9	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.04	.99	.....	1.04	.99
24–24.9	*$0.98	*$0.90	*$0.93	*$0.88	.....	.....	.....	.....	.....	1.07	1.02	.....	1.07	1.02
25–25.9	1.00	.92	95	.90	.....	.....	.....	.....	*$0.78	1.10	1.05	.....	1.10	1.05
26–26.9	1.02	.94	.97	.92	.....	.....	.....	.....	.80	1.13	1.08	.....	1.13	1.08
27–27.9	1.04	.96	.99	.94	.....	.....	.....	.....	.82	1.15	1.10	.....	1.15	1.10
28–28.9	1.06	.98	1.01	.96	*$1.03	.....	.....	*$1.20	.84	1.17	1.12	.....	1.17	1.12
29–29.9	1.08	1.00	1.03	.98	1.05	.....	.....	1.22	.86	1.19	1.14	.....	1.19	1.14
30–30.9	1.10	1.02	1.05	1.00	1.07	.....	.....	1.24	.88	1.21	1.16	$1.16	1.21	1.16
31–31.9	1.12	1.04	1.07	1.02	1.09	.....	.....	1.26	.90	1.23	1.18	1.18	1.23	1.18
32–32.9	1.14	1.06	1.09	1.04	1.11	.....	.....	1.28	.92	1.25	1.20	1.20	1.25	1.20
33–33.9	1.16	1.08	1.11	1.06	1.13	.....	.....	1.30	.94	1.27	1.22	1.22	1.27	1.22
34–34.9	1.18	1.10	1.13	1.08	1.15	*$0.96	*$0.91	1.32	.96	1.29	1.24	1.24	1.29	1.24
35–35.9	1.20	1.12	1.15	1.10	1.17	.98	.93	1.34	.98	1.31	1.26	1.26	1.31	1.26
36–36.9	1.22	1.14	1.17	1.12	1.19	1.00	.95	1.36	1.00	1.33	1.28	1.28	1.33	1.28
37–37.9	1.24	1.16	1.19	1.14	1.21	1.02	.97	1.38	1.02	1.35	1.30	1.30	1.35	1.30
38–38.9	1.26	1.18	1.21	1.16	1.23	1.04	.99	1.40	1.04	1.37	1.32	1.32	1.37	1.32
39–39.9	1.28	1.20	1.23	1.18	1.25	1.06	1.01	1.42	1.06	1.39	1.34	1.34	1.39	1.34
40 & Above	1.30	1.22	1.25	1.20	1.27	1.08	1.03	1.44	1.08	1.41	1.36	1.36	1.41	1.36

* Minimum price and applies also to purchases of lower gravity.

[1] Conroe, Tomball, Satsuma, Raccoon Bend Deep fields.

[3] Upper Texas Gulf Coast, including Goose Creek, Spindle Top, etc., and some fields of Louisiana Gulf Coast, including Black Bayou, White Castle, Vinton, Hackberry, etc.

[3] Choctaw, Darrow, Lockport, Iowa (Magnolia posting), Cameron Meadows, etc.

[4] Anahuac, Dickinson, Flour Bluff, Turtle Bay.

[5] Lower Texas Gulf Coast, including Refugio, Saxet, etc.

[6] Duval, Jim Hogg, Webb, and Zapata Counties; Heyser, Placedo fields.

Mid-Continent Flat Prices

	Flat Price	Date Posted
Arkansas:		
Smackover	$0.90	1–28–37
Louisiana·		
Garden Island	1.37	1–28–37
Lafitte	1.24	1–28–37
Texas:		
East Texas	1.35	5–22–37
Talco	.73	1–28–37
Livingston, Cleveland	1.27	1–28–37
Hardin	1.15	1–28–37
Van	1.10	1–28–37
Pettus	1.37	1–28–37
Pecos County	.91	1–28–37
Pecos Shallow	.81	1–28–37
Luling	1.00	1–28–37
Lytton Springs	1.12	1–28–37
Salt Flat, Darst Creek, Hilbig, Carroll, Clark, Zoboroski	1.09	1–28–37

Michigan Prices

Central Michigan	$1.42	1–29–37

Middle West Prices

Lima	$1.25	1–28–37
Illinois	1.35	1–28–37
Princeton	1.35	1–28–37
Western Kentucky	1.40	1–28–37

Rocky Mountain States Prices

	Flat Price	Date Posted
Elk Basin	$1.30	1–28–37
Frannie Light	.70	11– 4–36
Frannie Heavy	.62	11– 4–36
Grass Creek Light	1.30	1–28–37
Grass Creek Heavy	.62	11– 4–36
Hamilton Dome	.57	11– 4–36
Big Muddy	1.23	1–28–37
Rock Creek	1.20½	1–28–37
Sunburst	1.20	1–28–37
Lance Creek	.97	1–28–37
Osage	1.08	.....
Cat Creek	1.07	8–25–33
Cut Bank	1.35	6– 3–36
Pondera	1.05	9–29–33
Hogback	1.00	9– 8–33

Pennsylvania Prices

Bradford-National Transit	$2.82	6– 7–37
Sw. Pa. Pipe Line	2.57	6– 7–37
Eureka Pipe Line	2.52	6– 7–37
Buckeye Pipe Line	2.37	6– 7–37
Corning Grade	1.42	6– 7–37

Canada Prices

Petrolia	$2.10	9– 9–33
Oil Springs	2.17	9– 9–33

Mexico Prices

F.O.B. Tampico; net; U.S. Currency, buyer pays tax	$1.24	.....

Major Price Changes

	Penna. (Nat. Tr.)	Mid.-Cont. (36 Gr.)	Calif. (26 Gr.)
June 19, 1933	Up 10	Up 19	.....
June 26, 1933	Up 10	.....	Up 9-12
July 6, 1933	Up 13	Up 10	.....
July 17, 1933	Up 15	.....	.....
July 28, 1933	Up 15	.....	.....
August 11, 1933	Up 10	.....	.....
August 24, 1933	.....	Up 10	.....
August 30, 1933	Up 15	.....	.....
September 6, 1933	Up 10	Up 10	Up 15
September 8, 1933	.....	Up 15	.....
May 1, 1934	Up 10	.....	.....
November 6, 1934	Cut 25	.....	.....
December 6, 1934	Cut 25	.....	.....
January 4, 1935	Up 15	.....	.....
February 4, 1935	Up 15	.....	.....
May 16, 1935	Cut 15	.....	.....
June 26, 1935	Cut 15	.....	.....
July 16, 1935	Cut 10	.....	.....
August 29, 1935	.....	.....	Cut *1
September 6, 1935	Up 5	.....	.....
October 29, 1935	Up 15	.....	.....
November 1, 1935	.....	.....	Up *28
November 18, 1935	Up 15	.....	.....
December 6, 1935	.....	.....	Up *9
January 9, 1936	.....	Up 10	.....
January 13, 1936	Up 15	.....	.....
February 26, 1936	.....	.....	Up †5
December 28, 1936	Up 12	.....	.....
January 28, 1937	.....	Up 12	.....
February 24, 1937	Up 10	.....	.....
June 7, 1937	Up 15	.....	.....

* Signal Hill 26 gravity. † Seal Beach 26 gravity.

Crude Production Taxes

Oklahoma—Five percent of gross value less royalty interest.

Texas—2¾ cents or 2¾ percent, whichever is higher.

Louisiana—From four to 11 cents a barrel, depending upon gravity.

Arkansas—2.6 percent of gross market values.

Montana—Two percent of gross value at well and ⅜ of 1c per barrel.

New Mexico—Severance tax of 2 percent on oil and gas.

Wyoming and New Mexico—Production tax based upon state and county assessments.

California—.66443 mills per barrel of oil produced and 17.39 cents per acre on proved oil lands.

Oil in the Courts

[*Continued from page 11*]

the code, the posting of prices is required.

"Of course, when a price is posted by one company, other companies are extremely apt to post the same price. The fact that the price is the same does not indicate conspiracy. It is far more indicative of an open market than a controlled market. How is a buyer to know he is not paying more than others unless there is some method for the posting of prices?"

It is recalled that the code itself was scarcely discussed before the Texas Supreme Court. Arguments in that tribunal largely were concerned with the validity or invalidity of the state anti-trust laws.

Trial in 1938

Since the court will take its summer recess late in July, it is unlikely that it will have time to pass upon the motions prior to that date. Since the district court docket is made up early in the term of the court, it becomes increasingly unlikely that the case will be set early enough for trial before 1938.

Carlisle loses

Federal Judge T. M. Kennerly July 1 overruled the habeas corpus petition filed in behalf of O. H. Carlisle, division sales manager for Gulf Oil Corporation, who is charged in Madison, Wisconsin, with violation of the Sherman anti-trust laws along with many other major oil company executives.

July 7 was set as the date when Judge Kennerly will enter an order remanding Carlisle to the custody of the United States marshal to await removal to Madison. While most of the defendants waived extradition, Carlisle had sought to prevent his transfer. United States district commissioner at Houston recently refused to approve an order for Carlisle's transfer. The government then took the plea to federal court. When the latter ruled against the commissioner, Gulf Oil Corporation lawyers brought a habeas corpus action. It is understood, an appeal to the United States circuit court of appeals at New Orleans is now planned by the defendant.

Yates Vacancy

The question of whether a 30-acre vacancy strip exists between the J. H. Tyler No. 1 and the T. C. Ry. No. 104 surveys in the Yates (Texas) oil field has been ordered tried by a Texas District Court jury in Travis County.

The Third Court of Civil Appeals this week remanded for a jury determination of this question. The vacancy suit styled on appeal Stanolind Oil and Gas Company vs. State of Texas. The lower court had ordered an instructed verdict for the State and the State's claimants—the Dogie lease, the two Cardinal leases, and the Bryant lease, the entire vacancy comprising 30 acres in a strip 123 varas in width.

While declining to pass upon the location of boundary lines which will determine the existence or non-existence of the claimed vacancy, the court did make an interesting discussion of the rights of licensed surveyors to locate vacancies.

Stanolind, which is the adverse claimant in the suit, also filed an application for purchase of the vacancy if there was a vacancy, basing its application upon a survey made by a licensed surveyor. The surveyor was named as Stanolind's agent in the application. The court said that since the surveyor was disqualified by law from making the application as principal, he likewise was disqualified from acting as agent.

20 Companies Involved

Affecting more than $2,000,000 worth of real estate holdings and some 20 major oil companies and royalty concerns, one of the biggest escheat actions ever started in Oklahoma was begun here last week with the filing of 50 suits, according to Everett Collins, county attorney of Creek County.

The bulk of the suits charge the companies with violation of a statute which forbids corporations doing business in the state holding land more than seven years unless it is shown essential to the conduct of their business. The companies are also charged with failure to file annual reports with the Oklahoma corporation commission. Copies should also have been filed with the registrar of deeds in Creek County, according to the suits.

The wholesale legal actions were filed in the superior court at Bristow and involve many valuable tracts of land leased for oil purposes. One Bristow and two Sapulpa law firms were named as informers under the escheat law, said Collins.

CALIFORNIA CRUDE OIL PRICES (Posted February 26, 1936).

(All gravities above those quoted take highest prices of that field.)

Gravity	Signal Hill	Seal Beach Alamitos Heights	Huntington Beach	Inglewood	Playa Del Rey	Olinda Brea Canyon	Athens Rosecrans	Elwood Terrace	Torrance	Richfield	Whittier East Coyote La Habra	Montebello	West Coyote Hills	Santa Fe Springs	New Hall McKittrick Kern River Round Mountain	Mountain View	Midway-Sunset Buena Vista Hills Elk Hills	Lost Hills	Coalinga	Wheeler Ridge
14-14.9	$.80	$.79	$.78	$.79	$.80	$.76	....	....	$.80	$.76	$.76	$.77	$.78	.....	$.70	....	$.70	$.70	$.70	....
15-15.9	.80	.79	.78	.79	.80	.76	....	....	.80	.76	.76	.77	.78	.....	.70	....	.70	.70	.70	....
16-16.9	.80	.79	.78	.79	.80	.76	....	....	.80	.76	.76	.77	.78	.....	.70	....	.70	.70	.70	....
17-17.9	.80	.79	.78	.81	.80	.76	....	....	.80	.76	.76	.77	.78	.....	.70	....	.70	.70	.70	....
18-18.9	.80	.79	.78	.84	.80	.78	....	....	.82	.76	.76	.77	.78	.....	.70	....	.70	.70	.70	....
19-19.9	.82	.79	.82	.87	.84	.81	....	....	.85	.76	.78	.77	.78	.....	.70	$.70	.74	.74	.71	$.70
20-20.9	.85	.79	.85	.90	.88	.84	....	....	.88	.78	.82	.77	.80	.....	.....	.70	.78	.78	.72	.70
21-21.9	.88	.79	.89	.93	.93	.88	....	....	.91	.80	.85	.77	.84	$.78	.....	.73	.82	.82	.74	.70
22-22.9	.92	.82	.92	.96	.98	.92	....	....	.93	.84	.89	.79	.88	.78	.....	.77	.87	.86	.78	.72
23-23.9	.95	.86	.96	.99	1.02	.96	$.84	....	.96	.88	.93	.82	.92	.78	.....	.80	.92	.90	.82	.76
24-24.9	.99	.91	1.00	1.02	1.06	.99	.88	....	.99	.91	.96	.85	.96	.82	.....	.84	.97	.94	.86	.79
25-25.9	1.03	.95	1.03	1.05	1.11	1.03	.93	....	1.02	.95	....	.89	.99	.86	.....	.88	1.01	.98	.90	.83
26-26.9	1.06	1.00	1.07	1.09	1.16	1.06	.98	....	1.05	.98	....	.92	1.03	.90	.....	.91	1.06	1.02	....	....
27-27.9	1.10	1.05	1.11	1.12	....	1.10	1.03	....	....	1.02	....	.96	1.06	.95	.....	.95	1.10	1.06	....	....
28-28.9	1.14	1.10	1.14	1.15	....	1.14	1.07	....	....	1.06	....	.99	1.10	.99	.....	.99	1.15	1.10	....	....
9-29.9	1.17	1.15	1.18	1.18	F.O.B.	1.17	1.12	....	....	1.09	....	1.03	1.14	1.03	.....	1.02	1.20	1.14	....	....
-30.9	1.21	1.19	1.22	1.21	Pipe	1.21	1.17	F.O.B.	....	....	....	1.07	1.17	1.08	.....	1.06	1.25	1.18	....	....
-31.9	....	.....	....	1.24	Line	1.24	1.22	Ship	Kettleman Hills			1.11	1.21	1.12	.....	1.09	1.29	....	....	....
-32.9	....	.....	....	1.27	....	1.27	1.27	....				1.14	1.25	1.16	.....	1.13	1.34	....	....	....
-33.9	....	.....	....	....	....	....	1.32	$1.28	1.19			1.18	1.28	1.20	.....	1.17	1.38	....	....	....
34-34.9	....	.....	....	....	....	....	1.37	1.32	....	1.23	....	1.22	1.32	1.25	.....	1.20	.....	....	....	....
35-35.9	....	.....	....	....	....	....	1.42	1.35	....	1.27	....	1.25	....	1.29	.....	....	.....	....	....	....
36-36.9	....	.....	....	....	....	....	1.46	1.39	....	1.31	....	1.29	....	1.33	.....	....	.....	....	....	....
37-37.9	....	.....	....	....	....	....	1.51	1.43	....	1.35	....	1.32	....	1.37	.....	....	.....	....	....	....
38-38.9	....	.....	....	....	....	....	1.56	....	....	1.39	....	1.36	....	1.42	.....	....	.....	....	....	....
39-39.9	....	.....	....	....	....	....	1.61	....	....	1.43	....	1.40	....	.....	.....	....	.....	....	....	....
40-40.9	....	.....	....	....	....	....	1.66	....	....	....	....	1.43	....	.....	.....	....	.....	....	....	....

Industry's Earnings

[*Continued from page 18*]

the country with over-production. The bottom dropped out of the crude market. In East Texas some crude oil was sold for 5 to 10 cents a barrel, and fuel oil was given away to truckers for hauling it out of the way of refiners, who meanwhile cut gasoline prices repeatedly in trying to raise cash to keep going. Service station prices similarly were under-cut in widespread price wars, and retail business was as unprofitable as operations in the other branches of the industry. For the whole country, the average price of crude in 1931 was 65 cents a barrel, compared with $1.19 in 1930. The oil companies wrote their inventories down accordingly. These circumstances explain why virtually all oil companies showed losses in 1931.

Recovery Begins

In 1932 the downward trend of oil consumption still was in progress, but East Texas development was farther along, and prices showed some improvement, enabling the oil industry as a whole to show a small profit, in contrast with the loss of the previous year. In 1933 oil demand finally turned upward, and although prices again were depressed, a little improvement in earnings occurred. In 1934 both prices and business volumes increased substantially, and oil company profits doubled. In 1935 the prices remained about unchanged, but oil consumption expanded further, and earnings showed further material improvement. In 1936 oil demand and oil prices again improved, and so did profits. In the first half of 1937, also, both business volumes and prices improved further, and earnings likewise increased.

The importance of the relation between oil demand, prices, and oil company profits is being demonstrated this year. The consumption of petroleum is running this year at the highest levels on record, and this fact largely accounts for the prospect that 1937 earnings may be as great as those of 1929, since prices have not been as high in 1937 as in 1929.

TABLE 6

Annual Net Profits of 4 Oil Companies in the Past 2 Years

After all deductions, including interest, depreciation, depletion, amortization, federal taxes, minority interest, etc.

YEAR	American Maracaibo Company	Chesebrough Manufacturing Company	Salt Dome Oil Company	Universal Consolidated Oil Company	Total of 4 Companies of Table 6
1935	$*137,532	$690,034	$*62,021	$*103,541	$ 386,940
1936	*175,913	894,919	*170,511	239,561	788,056

*Loss.

TABLE 7

Summary of Recent Yearly Profits of 61 Oil Companies as Shown in Tables 2, 3, 4, 5 and 6

Net profits, after all deductions, including interest, depreciation, depletion, amortization, federal taxes, minority interest, etc.

YEAR	Table 2 — 44 Companies	Table 3 — 5 Companies	Table 4 — 5 Companies	Table 5 — 3 Companies	Table 6 — 4 Companies
1926	$596,307,186	.....	.....	.....	.....
1927	280,177,822	.....	.....	.....	.....
1928	572,425,901	.....	.....	.....	.....
1929	657,784,847	.....	.....	.....	.....
1930	287,535,440	.....	.....	.....	.....
1931	*103,355,825	$*266,479	.....	.....	.....
1932	63,731,111	958,471	.....	.....	.....
1933	81,701,726	630,062	$3,709,311	.....	.....
1934	161,886,371	1,311,627	4,912,131	$*3,851,335	.....
1935	262,052,773	1,613,694	7,307,860	*788,391	$386,940
1936	430,181,308	1,640,415	16,424,243	85,200	788,056

*Loss.

TABLE 8

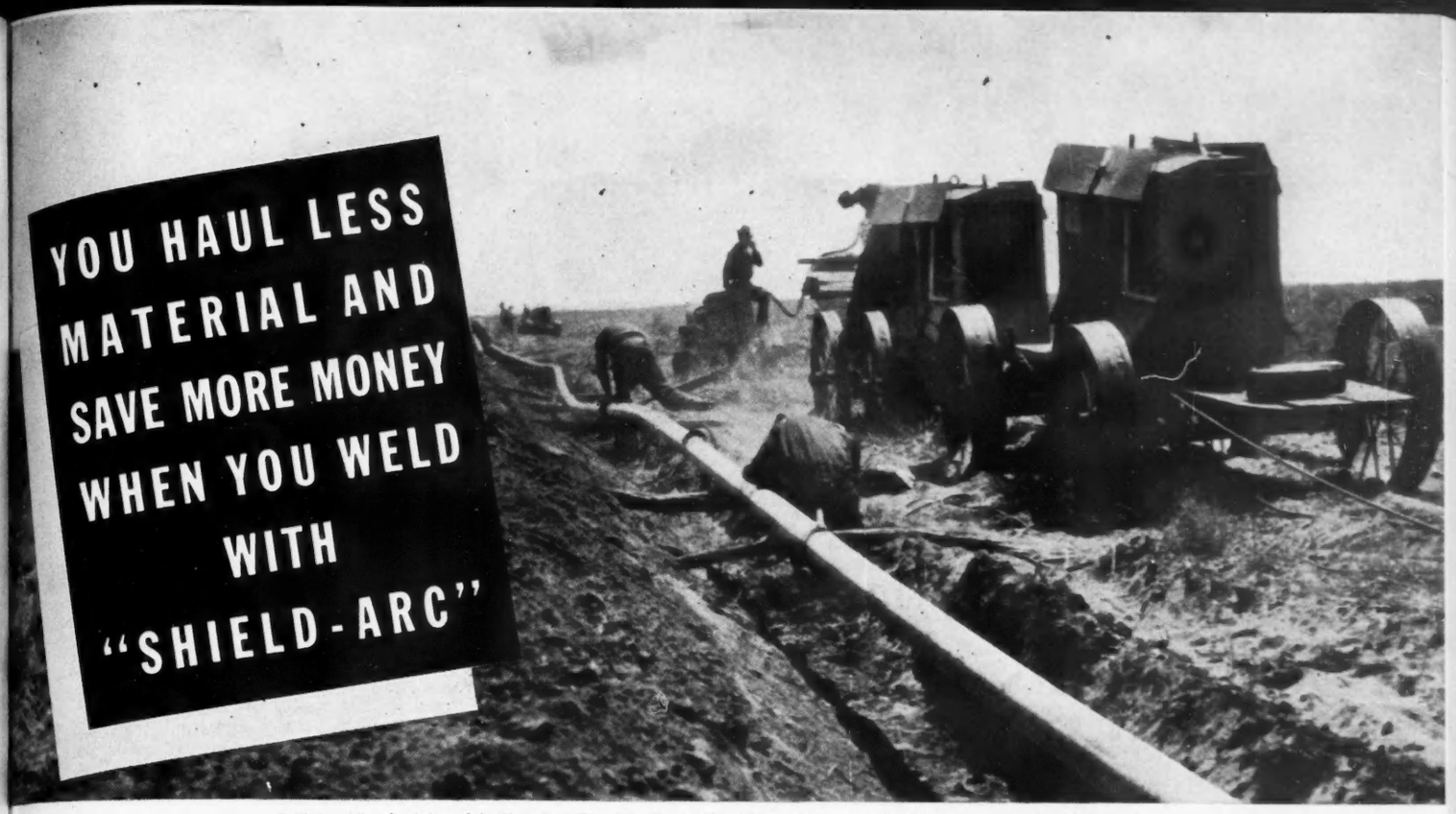
Annual Net Profits of a Group of Subsidiary Companies and Reorganized Companies in Past 11 Years

After all deductions, including interest, depreciation, depletion, amortization, federal taxes, minority interest, etc.

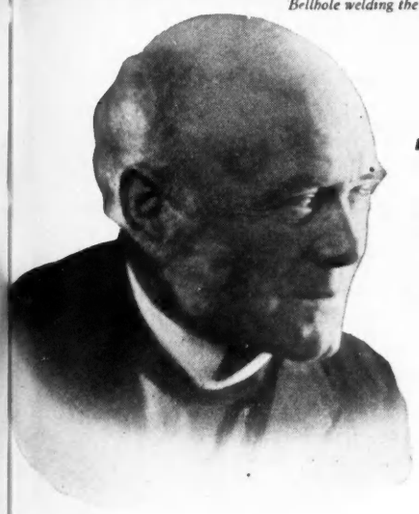
YEAR	California Petroleum Corporation (Controlled by The Texas Corporation)	Colon Oil Corporation (Owned 75% by Royal Dutch-Shell Group)	Creole Petroleum Corporation (Controlled by Standard Oil Company, New Jersey, Since June, 1928)	Humble Oil & Refining Company (Controlled by Standard Oil Company, New Jersey)	Imperial Oil, Ltd. (Subsidiary of Standard Oil Company, New Jersey)	Indian Refining Company (Controlled by The Texas Corporation Since January, 1931)	Louisiana Oil Refining Corporation (A Cities Service Company Property)	Texon Oil & Land Company (Over 50 % Owned by Continental Oil Co., Delaware)	Warner-Quinlan Company (Substantial Interest Now Owned by Cities Service Company)
1926	$6,608,567	A	.....	$19,385,572	.....	$1,030,549	$2,039,376	.....	$572,412
1927	1,315,451	A	$337,862	7,111,738	.....	6,091	188,622	.....	787,560
1928	1,648,919	B	611,731	19,277,145	$22,963,264	656,396	1,535,317	.....	1,413,735
1929	5,718,734	B	2,434,189	32,535,080	26,350,309	825,476	1,508,171	.....	1,364,955
1930	3,118,702	*$1,289,944	1,665,045	18,083,490	19,020,360	*3,035,886	*1,329,923	2,175,799	*1,655,832
1931	*712,048	*822,336	4,510,465	2,765,092	18,226,894	*3,130,987	*2,330,719	.....	*711,524
1932	*2,360,966	*1,408,359	2,075,404	14,896,613	14,713,238	*2,298,844	*1,964,147	1,580,866	*2,071,764
1933	603,961	*1,100,521	4,106,100	20,847,817	14,101,561	*1,180,167	*1,502,508	*224,276	*950,592
1934	581,368	*1,410,384	5,315,254	21,989,954	25,771,653	*885,158	*2,433,338	423,095	*1,974,129
1935	*51,470	C	5,509,067	23,966,326	25,229,850	1,351,806	D	244,073	D; C
1936	2,543,399	C	8,596,448	34,183,527	.....	1,333,002	E	341,306	D; C

* Loss.
A Company was not organised until later.
B Not operating.
C Under trustee: in re-organization.
D No statement issued for year, and results of operations not available.
E Assets and liabilities assigned to Arkansas Fuel Oil Company on November 24, 1936, by Decree of United States District Court, Western District of Louisiana, Shreveport, Louisiana, under plan of reorganization.

YOU HAUL LESS MATERIAL AND SAVE MORE MONEY WHEN YOU WELD WITH "SHIELD-ARC"



Bellhole welding the oil line of the Trans-Pecos Pipe Line Co. in New Mexico. Contractors: Fredell Construction Co., Houston, Texas.



"Sand! I'd rather have it in my *food* than in my haulage costs, Lad."

"Forget the sand, Pop! Here's how to weld more and haul less."

"You know, Pop, this 40-mile *'Shield-Arc'* welded line running through the deep sand of southeastern New Mexico illustrates another reason why the electric arc method pleases the pipe line builders. The point is simply this:

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WORLD DEVELOPMENT and TECHNOLOGY

Edited by
WM. V. GROSS, Associate Editor

World Congress

400 PAPERS ARE PRESENTED AT FIVE SESSIONS IN PARIS

By GEN. JAMES G. STEESE, D. S. M., Sc. D., F. R. G. S.,
President of Guajillo Corporation

AT the Second World Petroleum Congress held in Paris June 14 to 19 during the International Exposition, five technical sessions met simultaneously in the forenoons, with an occasional afternoon meeting to finish up uncompleted business. Printed resumes in English, French and German of the 400 or more papers presented were issued in advance of the meetings.

General reporters had been designated to review each group of papers, and only these reporters' findings were discussed during sessions. Each section reached such conclusions or adopted such resolutions as seemed necessary.

Tulsa Invites Next Congress

Various sub-committees had special meetings to handle the mechanics of the congress. There was a formal combined opening session for organization purposes, and a final solemn plenary session to approve resolutions evolved by the technical sessions and to provide for a permanent organization to prepare for the next, third, congress. An invitation to hold the Third World Petroleum Congress in Tulsa, Oklahoma, in 1940 was considered.

Paris in June is always delightful. This year, with the depression over, tourist business reviving, and the International Exposition in full swing, it was particularly gay. To have been there as an official U. S. government delegate to the Second World Petroleum Congress was almost too good to have been true.

The popular idea of an International Congress, or of any kind of a convention, is a lot of stodgy proceedings, tiresome speeches, and trips to various works, with endless technical descriptions. However, I must insist that that is not all of a congress. There are many attractive non-technical features of a travel, historic, or social nature that make the congress well worth while merely as a trip, even if one has no other interest.

Technical details of the congress I shall leave to THE OIL WEEKLY'S official representative at the congress, but the afternoons and evenings were employed in special excursions, personally conducted, banquets, special entertainments, both formal and informal, in visiting the International Exposition, and for seeing something of Paris, historic, artistic, gastronomic, theatric, night-life, etc., according to individual tastes.

The "Comite des Dames" organized conducted visits for the ladies to the leading establishments for hats, dresses, fashion shows, art collections, Old Paris, Musee du Louvre, etc. Every afternoon they were given a tea in some fashionable French home, at the Universite, or some popular cafe.

For the men there were afternoon excursions to refineries, experimental laboratories, Renault Motor Works and other big shops, geophysical exhibits, open-air museum, special lectures and technical films.

Colonel Ernest O. Thompson, of our official delegation, chairman of the Interstate Oil Compact Commission and member of the Texas Railroad Commission, gave a very interesting and instructive address which was reprinted and distributed in pamphlet form.

President of France Attends

The President of France attended the Monday afternoon meeting. On Tuesday evening there was an official banquet held in Chemistry House and attended by over a thousand congressists and their ladies. Evening clothes with decorations was the prevailing dress, making a very colorful gathering. The banquet was followed by an hour of dance music by artists of the Corps de Ballet of the Orchestra of the Operâ. Representatives of the leading nations responded to toasts in their own languages.

Thursday afternoon a reception was given by the chamber of commerce. Saturday afternoon and evening were devoted to a visit to the Chateau of Versailles and the Palaces of the Trianon. Tea and cocktails were served on the Terrace, followed by dinner in the Orangerie. As always, dinner consisted of numerous beautiful courses with three or four kinds of wine, and conversation in many languages. Finally, there was a "fete de nuit," consisting of music and ballet on a stage erected on a barge in the Lake, followed by the illumination of the entire gardens with their dozens of electric fountains and accompanied by an elaborate display of fire works, an impressive and fitting winding up of the congress.

After the congress, there were four optional trips of four or five days each offered: to the west of France, including a visit to oil refineries, as well as to Rouen, Deauville, and other coast resorts; another to the north of France, including Arras, Etaples, Touquet and other places; and another to the east, including the oil mines at Pechelbronn, Nancy, Strasbourg, and a two-day motor circuit of the crests of the Vosges Mountains. The fourth excursion to the southwest into the Bordeaux country was cancelled due to an insufficient number of subscribers. Everywhere, the various parties were entertained by teas and dinners.

With all this official entertaining, it was difficult to find time to see much of the International Exposition or to go to the theatres and other points of interest in Paris not covered by the congress program. However, there were a number of delightful informal gatherings, and one had a chance to learn what to do the next trip to Europe.

After all, the work of the congress was largely in the hands of sub-committees, and the majority of the delegates, including those who had submitted papers, had most of their time at their own disposal, and were free to take in the social, historic, and other entertainment features.

While these congresses serve as an international clearinghouse in the dissemination and analysis of technical information, they have the no less important function of permitting the formation of international friendships and the cementing of mutual international interests looking to the improvement of international relations in general.

HUNGARY'S WELLS

Five wells brought in at Bokazek in the Bukk Hills, northeast of Budapest, reveal presence of a petroleum reservoir estimated as capable of supplying 15 percent of Hungary's petroleum needs. The wells are producing from depths averaging about 931 feet. In addition, Hungary has this year discovered oil at Lispe.

Pineau Honored

BUREAU SET UP FOR THIRD WORLD PETROLEUM CONGRESS

By R. W. BYRAM, Associate Editor

PARIS, France, June 30, 1937—The Second World Petroleum Congress concluded here yesterday was a most successful meeting; 1632 representatives from 32 countries registered.

Plans were formulated for the establishment of a permanent bureau to continue the work of the congress, and to prepare for the next meeting. Headquarters of this bureau are to be in London, where a full time secretary will be employed and meetings held from time to time.

Louis Pineau, head of the French Government oil control, was named president of honor. Vice-presidents, or directors named were: Ch. Bihoreau, director of technical services, office National Combustible Liquids; S. Scheer, president A. F.T.P.; Lt.-Col. S. J. M. Auld, president Institution of Petroleum Technologists; J. H. C. De Brey, president, Netherlands National Committee; T. Dewhurst, past-president, Institution of Petroleum Technologists; Dr. Gustav Egloff, chairman American national committee on refining; Prof. Erculisse, president, Belgian national committee; Dr. W. P. Haynes, American Association of Petroleum Geologists; Dr. Mrazec, president, Roumanian national drilling committee; Prof. Stanislas Pilat, president, Polish national committee; Dr. Streintz, president, Austrian national committee; Prof. L. Ubbelohde, in charge of the German delegation; General Secretary, J. Filhol, director information service, O. N. C. L.

Interpreters Translate Comments

The congress was organized into sections, each section meeting every morning. Many of the papers had been received well in advance, and of these, summaries had been made. These summaries were delivered in French and the author of the paper was permitted to offer explanatory remarks. Interpreters translated these comments into German and English. A large number of papers had been printed and were distributed to the congressists.

At its final meeting the congress resolved to continue the work through the bureau named, whose members may add others at their discretion. One of the most important functions of this bureau will be to determine the place and time of the next meeting.

Three Nations Invite Congress

Representatives from Austria, Germany and the United States extended invitations for the congress to be held in those countries. The United States invitation provided that the meeting should be held in Tulsa, Oklahoma, in 1940, during the oil show there.

Europeans favored coming to the United States, but felt that the attendance would be smaller than if it were held in some country here, but most individuals expressed a desire to come to the states in order to have an opportunity to study the country. They pointed out that the United States is a dominant factor in the oil industry, and that the congress should logically be held there soon.

A second resolution passed by the congress provided that "in order to avoid overlapping and contradiction in the question of international standardization of nomenclature and the methods of testing petroleum products . . . all proposals made on international standardization and transmitted to the proper committees may be adopted as rapidly as possible."

Six Recommendations Adopted

In addition to the resolutions, six recommendations were adopted. These provided that:

1. The institutions and associations of technicians are asked by the congress to establish a comparable rationalization of their activities, to facilitate the preparation of future congresses, to assure, by direct relations between the sections, the continuity of the contacts initiated during the congress.
2. The congress recommends that the permanent committee (bureau) may institute a commission of petrol-technicians, mathemeticians, physicians and chemists in order to study the function viscosity/temperature of liquids.
3. The congress recommends that the national associations collect data on corrosion.
4. The congress recommends that the permanent council try to establish a summary of the already existing, but dispersed information, concerning the efforts undertaken in order to avoid losses due to evaporation.
5. The congress recommends that on the occasion of World Petroleum Congresses, the authentic statistics of countries be available for the congressists in order to give them the opportunity to know the exact petrol situation at the moment in question.
6. The congress recommends that the permanent council may institute a commission in order to find out up to what extent specifications of electric safety plants for the petrol industry differ from specifications generally admitted in firy mines.

A full series of entertainment was provided at the meeting, arrangements being made for a trip each afternoon to one of the various refineries or factories near Paris. These trips gave visitors an ample opportunity to observe true working conditions in France. In addition, invitations were extended by other countries to visit other plants prior to and after the meeting was in session.

Formerly Djevad Eyoub, this technologist changed his name to Cevat E. Tasman in compliance with Turkish law and is supervising that nation's oil exploratory efforts.

WILL DRILL SOON

New Mexico company has 6000-hectare concession

Exploitation of a large tract of oil lands in northwestern Mexico is to be undertaken by Cia. Petrolera Mexicana de Ciudad Juarez, S. A., that American and Mexican interests have organized in Ciudad Juarez, Chihuahua state. Engineer Jose Hernandez Ojeda, geologist, is president of the company which has among its main executives Edward Sanders and Edward Wisbrun.

The company holds a federal concession to exploit and explore 6000 hectareas which H. A. Ballerstein, geologist of Eastland, Texas, pronounced highly promising. The concession is at Estacion Mesa, in the Juarez Valley, a few miles south of Ciudad Juarez. The first well is expected to start next month, the objective being 2000 feet.

GETS CONCESSION

Ohio Oil Company has obtained a concession from the Mexican ministry of agriculture to use 145,066 cubic meters of water per year from the Rio Grande for drilling operations in La Presa area in the Ciudad Mier municipality of Tamaulipas. The company will install a 0.15 meter diameter suction pump and a 100-horsepower gas or gasoline motor. It plans to lay 13,800 meters of 0.076-meter diameter pipe to convey the water from the river to the wells.

Extension Looms

SOUTHWEST TURNER VALLEY FLANK TEST HITS MADISON

MONARCH Royalties test, geological pathfinder in southwest Turner Valley, Alberta, Canada, encountered Madison limestone at 6525 feet and preparations are underway to set casing. Meanwhile, Richland Oil Company's No. 3 was drilling below 5515 feet and Royalite Oil Company's Sterling-Pacific 5 was making hole below 6355 feet. Both are expected to reach the lime this week.

A strike at Monarch Royalties would materially extend the crude area to the west, as the location is beyond the production line formed by Foundation Petroleum, Ltd.'s well on the south and Royalite Oil Company's Sterling-Pacific 3 on the north. Richland Oil Company's No. 3 is located close to the largest producing wells in the field —Royalite Oil Company's Sterling-Pacific 4, B. and B. Royalties and Turner Valley Royalties—on what is considered to be the most valuable oil land in Canada. Sterling-Pacific 5 is in the same section in which Sterling-Pacific 3 is producing about 270 barrels of crude daily and Sterling-Pacific 4 is believed producing around 2000 barrels following acid treatment this week.

Royalite Oil Company officials are withholding information on results of the treatment given Sterling-Pacific 4 until flush production settles. For a time it produced flush at the rate of 3500 barrels a day, compared to approximately 1000 barrels daily when brought in a few weeks ago, and it is estimated that it will maintain a settled daily yield of about 1900 barrels as a result of acidization with 5200 gallons.

Discovery Output Boosted

Another well at which acid treatment was most successful during the week was Turner Valley Royalties west flank discovery well, where daily production of 550 barrels was boosted to 2400 barrels, which is expected to settle to 1500 barrels. The strike at Turner Valley Royalties on June 16, 1936, precipitated the present intensive development of the west flank. Before the strike, naphtha wells were producing practically the entire output of the Valley.

Acid is awaited by other companies, and the treatment is to be given immediately to Foundation Petroleums, B. and B. Royalties, Century Royalties and Imperial Oil Company's Advance 5-A.

To Abandon Deepest

Arca Development Company, Ltd.'s test on the High River-Aldersyde structure, drilled to 8988 feet, deepest of any well in the British Empire, is to be abandoned. Salt water was found in the part of the limestone which in Turner Valley is productive and tests of the upper limestone and the Dalhousie sands produced a small but uncommercial quantity oil of good quality. There was no gas.

Two companies have been organized to test the Pouce Coupe area in northern Alberta—the Guardian Oil Company and the Dawson Creek Oil Company. Preparations are being made by both companies, which have the same slate of officers, to start drilling operations shortly. Officers of the companies are James I. Hill, president; J. J. O'Connor, secretary, and M. J. Howie, treasurer.

Turner Valley Drilling Report

Following is the situation at active Turner Valley wells: Brown Oil Corporation's No. 1, drilling at 4435 feet; No. 2, drilling at 4315 feet; No. 3, drilling at 420 feet; Command Oils, drilling at 810 feet; Commoil, drilling at 3825 feet; Davies Petroleum No. 1, drilling at 2420 feet; No. 2, drilling at 1420 feet; Firestone Petroleums, drilling at 2930 feet; Four Star Petroleums, drilling at 3155 feet; Globe Oil Company, cementing at 1450 feet; Granville Oil Company, drilling at 4380 feet; Home Oil Company, spudded, at 20 feet; Mercury Oils No. 8, drilling at 4150 feet; Mercury Royalties, drilling at 3960 feet; Model-Spooner-Reward Royalties, drilling at 2420 feet; Monarch Royalties, setting casing at 6525 feet; National Petroleum Corporation's No. 1, drilling at 2735 feet; No. 2, drilling at 2470 feet; Phillips Petroleum Company, drilling at 3200 feet; Prairie Royalties, drilling at 4400 feet; Richland Oil Company's No. 1, repairing derrick at 3050 feet; No. 2, drilling at 4505 feet; No. 3, drilling at 5515 feet; Rich-Well Oil Company, drilling at 1110 feet; Royal Crest Petroleums, drilling at 3500 feet; Royal Canadian Oils, drilling at 1075 feet; Royalite Oil Company's Sterling-Pacific 5, drilling at 6355 feet; No. 6, drilling at 320 feet; Share Royalties, drilling at 4695 feet; Sunburst Oils, drilling at 2610 feet; Sunset Oils, drilling at 2520 feet; Three Point Petroleums, drilling at 2615 feet; West Flank Petroleums No. 1, drilling at 2480 feet; No. 2 rigging.

NETHERLANDS INDIES

First quarter production shows 11 percent gain

Crude oil production of Netherlands Indies showed a gain of 11 percent during the first quarter of 1937, over the corresponding period of 1936, the output amounting to 1,704,345 metric tons, according to Donald B. Smith of Batavia, Java.

The heavier production during the early part of 1937 was due to increased activity of all important fields except the Tarakan fields where the output dropped from 192,859 metric tons to 184,123 metric tons. Particularly heavy gains were noted in the production of fields in Java and in Djambi.

Production by districts during the first quarter of 1937, with comparative data for the corresponding period of 1936, according to department of commerce figures, is shown in the following table:

Netherlands Indian Crude Oil Production (in Metric Tons)

	First Quarter 1936	First Quarter 1937
Java and Madura	102,723.4	177,372.4
North Sumatra	166,294.3	172,851.6
Palembang	668,415.6	690,110.7
Djambi	137,407.–	210,324.5
East Borneo	247,441.3	253,038.7
Tarakan	192,859.7	184,123.–
Boenjoe	1,344.5	345.3
Ceram	11,136.9	16,179.–
Netherlands Indies	1,527,622.7	1,704,345.2

SITUATION SPOTTY

Board still working on Mexico's labor troubles

While Mexico's government experts, the federal board of conciliation and arbitration and technical representatives of the companies involved in the recent general strike are endeavoring to arrange some sort of an agreement that will assure peace in the industry, at least for a while, the oil labor situation continues spotty.

Planned Strike Cancelled

A favorable sign of a trend to the right was the cancellation of planned 24-hour strikes against the Tampico units of the Huasteca Petroleum Company, Mexican Eagle Oil Company, and Imperio, S. A.

But among leftist activities was the assault upon Manuel White Morquecho, lawyer for the Sinclair-Pierce at the company's refinery at Arbol Grande, near Tampico, by 200 employes. The Mexican workers asserted that they did not desire to discuss their differences with the company with the attorney, manhandled him when he emerged from the refinery offices, and threw him into a pond of foul water. White Morquecho was rescued by John L. Welch, general superintendent of the company. It was necessary for the government to send 50 soldiers to restore order and protect White.

Union Says It's "Trivial"

The national oil workers' union described this outrage as a "trivial incident" and asserts that the companies and lawyers have committed "thousands of violations" of agreements with the workers.

The afflicted companies, in a statement, copies of which were sent to President Lazaro Cardenas, the chief of the labor department, and other federal executives, and addressed to the oil workers' union, urge the laborites to abstain from acts of violence and those that are against the law.

Dismissal recently by Huasteca Petroleum Company of 20 employes of its

Cerro Azul unit, whom it accused of committing acts of violence, caused so much disturbance that the company had to ask for federal troops to restore order and brought a special federal labor inspector to the scene in an effort to straighten out the situation.

Cost 600,000 Barrels

The general strike decreased May production by some 600,000 barrels. It is indicated by estimates of the ministry of national economy that the output in that month was 3,837,522 barrels. (The 600,000-barrel figure is probably very conservative.—Ed.) That compares with the ministery's rectified figures for April production, 4,249,838 barrels, but is much higher than the output in May, 1936 which was 3,235,255 barrels. The ministry expects that with speeded up production to make good for the 12-day layoff caused by the strike, this year's production will exceed that of 1936.

MUST MAKE REPORT

Federal arbitration board in Mexico gets time limit

The three experts Mexico's federal board of conciliation and arbitration appointed to investigate the condition of the 10 oil and three tanker companies involved in the general strike have been given until July 15 to render their report. The companies have assigned auditors and economic specialists to aid the government experts in their investigation.

Companies' Appointees

The companies' appointees are: W. H. Fellowes, chief auditor of Mexican Eagle Oil Company; J. Finke, chief auditor, and Enrique Bujons, and official, of Huasteca Petroleum Company; F. E. Armstrong, head of the labor department of Mexican Sinclair Oil Company; J. N. S. Longe, chief of Mexican Eagle's social service department, H. H. Sundquist, Eagle field superintendent; E. H. Repath, Huasteca assistant refinery superintendent; Engineer Joaquin Santaella, former chief of the government's petroleum department; Engineer Ezequiel Ordonez, Mexico's oldest geologist who located the first oil wells in this country; Rafael Mancera, former subsecretary of finance; Roberto Casas Alatriste, auditor of the Bank of Mexico; Dr. Gustavo Baz, noted economist; Dr. Fernando Ocaranza, former rector of the National University of Mexico, who has been assigned to make a special study of the medical aid demands of the oil workers, and Mario Dominguez, noted banker.

May Strike Again

It probably will be late July or early August before Mexico's federal board of arbitration and conciliation renders a decision on demands of petroleum industry workers who went back to their jobs recently after a 12-day strike without obtaining the hike pay and some other things for which they called the general strike.

However, one well informed source informed The Oil Weekly there might be another general strike before difficulties between the companies and labor are ironed out to the satisfaction of both.

Another source stated the outcome of the recent strike looked like peace without victory for the strikers and a complete victory, for the time being, for the oil companies.

To speculate on the government's attitude toward possible future repetition of the recent strike which paralyzed the oil industry in Mexico and several other dependent businesses at the same time, the government does not relish the idea of sacrificing the worthwhile income derived by it from normal function of the industry. At the same time, the companies may have been able to drive home to the government the fact that the oil workers have been receiving more pay than other industrial workers in Mexico. This may cause ultimate demands of the labor syndicate leaders to come nearer those which the companies can grant in keeping with practical business operation.

16 MEXICAN PERMITS

Most of new wells to be drilled in Vera Cruz

Easing up of the government's policy of restricting oil well drilling in Mexico has resulted in the granting by the petroleum department of 16 permits for tests in the central Gulf sector, mostly in Vera Cruz state. The permits include rights to drill four wells in Vera Cruz to the liquidating committee of the government's now defunct Petromex; one each to Globe Petroleum, Kern Mex Oil Company and Consolidated Oil Fields of Mexico; one to Hamilton & Devine, independents, for San Luis Potosi state, three to Ing. Fidel C. Martinez, for Ciudad Mier municipality, Tamaulipas state, near the American border, and the rest to small Mexican companies and individuals.

PLAN OIL BANK

Would finance working of Mexico's crude

Plans for establishment of a state supervised bank to finance exploitation of Mexico's federal oil reserves, presented by a group of petroleum belt congressmen, are being considered by President Lazaro Cardenas. The congressmen assert that such a bank is the only sure means of obtaining adequate and consistent exploitation of the reserves. The plans call for the institution to have its headquarters in Mexico City and its capital to be provided partly by private banks that are largely interested in oil matters and partly by the federal government.

MOROCCO DISAPPOINTS

French colony wildcatting generally unsuccessful

Although 70 tests have been sunk in Morocco and oil has ben found in varying quantities in a number of places, no decisive results have been obtained, according to a report of the president of Compagnie Francaise des Petroles to stockholders recently. He made the statement in connection with presenting a summary inferring that intensive wildcatting in the various French colonies during the past year had been unproductive of commercial discoveries.

Compagnie Francaise des Petroles holds the French share in Iraq Petroleum Company, an organization which produced 3,925,000 tons of crude petroleum in 1936. Of this, 23¾ percent went to the credit of Compagnie Francaise des Petroles. Capitalization of the company was recently increased from 475,000,000 to 600,000,000 francs.

IMPORTS UP

Argentina getting more finished oil products

Figures on imports of petroleum products by Argentina during the first quarter reveal what might be construed as a break in the curve of the aim of nationalization there, i.e., for the country to gradually cut down more and more on finished product imports, supplanting them with products of refineries of Yacimientos Petroliferos Fiscales.

Gasoline, representing one of the primary products on which the government, through Y.P.F., wishes to reduce imports, showed a substantial increase in bulk imports, or from 117,897 gallons in the first quarter of 1936 to 5,828,341 gallons during the first quarter of this year. Gasoline imported during the first quarter in cases, however, showed a loss of 195,000 gallons as compared with the first quarter of 1936, leaving a net increase in gasoline imports amounting to 5,515,444 gallons.

Imports of mineral "grease" amounted during the first quarter to 119,106 pounds, an increase. In addition, Cyril Crilley, trade commissioner, recently advised the United States department of commerce that the 61,827 metric tons of Diesel oil imported by Argentina during the first three months of 1937 represented an increase of the corresponding period of last year.

Crude oil imports by Argentina, however, showed a decline of 163,428 barrels from the first quarter of last year.

INDIA'S OUTPUT UP

Production of crude oil in India, including Burma, Punjab and Assam, totaled 9,619,104 barrels in 1936, an increase of about 4 percent over the 9,227,307 barrels produced in 1935.

The foregoing production for 1936 was divided as follows: Burma, 7,563,515 barrels; Punjab, 125,740 barrels; Assam, 1,929,849 barrels. Burma and Punjab both showed small increases for the year, while Assam sustained a loss of about 10,000 barrels from the 1935 figure of 1,939,617 barrels.

NEW SUMATRA FIELD

De Bataafsche Petroleum Maatschappij, operating subsidiary of Royal Dutch Shell in Netherlands India, is reported to have brought in a new field in Sumatra near the mouth of the Soengei Besitang river. The field, discoverey of which resulted from the first wildcat drilled in the area, is said to have indications of becoming one of major importance.

Legislative Actions

[*Continued from page 12*]

Ohio and Socony-Vacuum in setting retail prices. The Pennzoil Company made ethyl gasoline for Socony-Vacuum and made gasoline for Standard Oil Company of Pennsylvania on an exchange basis, R. A. Browne, secretary of the company, testified.

D. M. Sachs, president of National Transit Company, described operations of his company and its history. The gathering charge in this district is 20.84 cents per barrel, of which .84 cents in tax, and storage charges of 60 cents per thousand barrels are levied on oils stored more than 30 days. He said his company lost substantially on the operation of gathering lines in Pennsylvania which were retained chiefly for the benefit of producers who depend upon them to market their oil. If there were fewer gatherers of crude, the volume would be greater and consequently the charges to the producer would be lower, he added.

Demand Barely Met

Increased demand which present production barely supplies was responsible for the latest advance in Pennsylvania grade crude prices, A. W. Scott, vice president and secretary of Wolverine-Empire Refining Company, told the commission. Prices refiners quote on gasoline are set by competition and gasoline is a loss item in the Pennsylvania region, the cost being carried by lubricating oils, he said. The per gallon cost of the crude is 6.7 cents, whereas the per gallon selling price of gasoline is six cents, he pointed out.

Additional testimony that the refiner of Pennsylvania grade crude depends upon lubricating oils for his profit and must market his gasoline, an unavoidable product in the manufacture of lubricating oil, in a restricted area, was given by Frank Berry, vice president of James B. Berry Sons' Company, Inc.

Others who offered testimony at the Oil City hearing included Frank McGray, president of the Oil Creek Refining Company, Titusville; C. E. Kinder, general manager of the Cities Service Oil Company refinery at Titusville, and Norman A. Davis, president of the Mid-Penn Refining Company.

Legislation Studied

National legislative problems and the current investigation of the oil and natural gas industry occupied members of the Central Pennsylvania Oil Producers Association holding their annual convention here June 25.

Russell B. Brown, general counsel of the Independent Petroleum Association, told delegates that retention of the depletion allowance clause is the most important matter before the petroleum industry at this time. Repeal of the clause was recently urged by the treasury department along with means of plugging loopholes in the revenue law.

Efforts of the industry to secure the present set basis for depletion allowance, known as the 27½ percent allowance, were described by Brown who discussed its value to the small producer. The producer was practically at the mercy of the bureau of internal revenue under the old plan of a depletion allowance, he said, and many failed to get their allowance because of the numerous controversies that arose in its application.

"Producers Not Tax Evaders"

Brown declared in answer to the treasury department's contention that the depletion allowance was a means of tax evasion, that producers are not tax evaders. He pointed out the necessity of the allowance because of the peculiar status of the industry and characterized it vital to the welfare of the industry.

W. J. Brundred, Brundred Oil Corporation, who presided at the meeting in the absence of President David B. McCalmont, discussed legislation enacted by the recent state legislature and urged producers to take an active interest in the current legislative investigation of the industry. On his recommendation, a resolution was adopted informing the investigating commission that the association wished to present facts concerning production in the Central Pennsylania area.

Labor Situation

[*Continued from page 12*]

National Labor Relations Board for an election in the plant, to determine whether that union should be the collective bargaining agency for the employes, numbering about 850. Justification of the union's demand for the election is being investigated by the federal labor mediator of the area.

Government Order Defied

A court test of the authority of the National Labor Relations Board appeared to be in the making last week, when American Petroleum Company, controlled by the Cullinan interests, indicated it will not comply with an order to cease and desist "fostering and maintaining a company union" at its Norsworthy refinery on the Houston ship channel.

Charging that foremen at the plant were coercing employes into joining an independent employees' federation, the Oil Workers' International Union filed a complaint against the company, and following the complaint, the company was ordered by the regional director of the National Labor Relations Board to post bulletins in its plant ordering cessation of the fostering of a company union.

The company claims that a majority of the employees are members of the independent union, while the C. I. O. union claims it has a majority of the workers in its ranks.

It is now the federal government's next move.

When a company fails to comply with such an order as that issued to this company, there follows, usually, a public hearing, upon which the labor relations board bases a formal order.

When such a formal order of the board is defied, the board may go to a federal circuit court of appeals for an injunction to compel a company to obey the order. Violation of the court order will constitute contempt.

Canadian Union Sought

Organization of Turner Valley oil field workers is being undertaken by the Calgary Trades and Labor Council, following failure of the provincial government to institute a 40-hour week in the field.

Government officials recently conducted an investigation which revealed that a shortage of experienced Canadian drillers would seriously curtail operations and materially raise drilling costs in the new field. Operators indicated they would restrict operations to five or six days a week rather than to risk carrying on with inexperienced crews. Petitions signed by 350 workers who were against the shorter week were also presented to officials. Herbert Greenfield, Calgary, president of the Oil & Gas Association of Calgary, was named to present the side of the industry.

Hon. Dr. W. W. Cross, minister of trade and industry, subsequently announced no order limiting work hours would be issued.

Unionization is being promoted by a minority of the workers dissatisfied with the provincial government's refusal to order a 40-hour week.

Proration Matters

[*Continued from page 11*]

The same practice is sometimes followed with wells unable to make their normal allowable.

Under the new forms, on the reverse of the EB (Producers) report is a detailed "well status" report, which must show whether each well is flowing, agitating, pumping, dead, amount of gas, amount of water and amount of oil in daily averages. Sub-marginal pumpers alone are exempt; these may be reported collectively.

The first report must be filed by August 15, covering July production. Reports must be filed in district offices, and forms will be available at the district offices.

The commission also changed several of the other forms in regard to the affidavit. Hereafter the affidavit must be to the effect that the person signing it has "an unequivocal knowledge of the facts, and that they are true and correct."

Minor changes were likewise made in several other report forms, all changes except the well status order being effective August 1.

OKLAHOMA FIELDS

Billings production extended one location southeast.

* * *

Extreme weather reflected in drilling work during week.

* * *

Sunray and Olson make location on geophysical high.

Oklahoma City.—Phillips Petroleum Company and Shell Petroleum Corporation's Hackett 3, NW SE SE 21-23n-2w, extended Billings pool in Noble County one location southeast when it established a potential of 1837 barrels of oil from 4356 feet, Wilcox sand. The oil was accompanied by 12,000,000 cubic feet of gas.

In another part of the pool, Ohio Oil Company was having little success at State 1, SWc 13-23n-3w. The well was acidized at 3910 feet with 2500 gallons and given a 25-barrel load. Allowed to stand for 36 hours, it was opened and made one flow, most of which was the oil load.

Preparing to Drill Plugs

Farther south, in the Logan County extension of Lucien pool, Mid-Continent Petroleum Corporation's Bulling 1, NEc 5-19n-2w, was bailing preparatory to drilling plugs. The well topped the first Wilcox sand at 4897 feet and set seven-inch casing at 4880 feet. Depth is 4900 feet.

Meanwhile, in the Noble County portion of Lucien, Stanolind Oil & Gas Company and Amerada Petroleum Corporation were preparing to deepen at Pfeiffer 7, SWc 33-20n-2w, below 5017 feet. Top of the second Wilcox sand was encountered at 4925 feet.

A dry hole seemed in store for a wildcat drilling in Alfalfa County. Olson Drilling Company et al's Acre 1, CSW SE 14-24n-11w, has been stuck with a very bad fishing job at 3700 feet for some time. It had been plugged back to 6850 feet the first time and later to 6480 feet. When tools stuck 1200 feet off-bottom, the line kinked and made it almost impossible to fish the tools. The test was originally drilled to 7332 feet in the second Wilcox sand.

Gulf Will Shoot Well

In Moore pool of Cleveland County Gulf Oil Corporation's James 3, NE SW SW 27-10n-2w began showing for a producer, flowing 703 barrels of oil in four hours and will be shot. James 2, SE NW SW 27-10n-2w, was fishing for liner at 7283 feet. The well had been running tubing to restore production.

Sinclair Prairie Oil Company et al's Franklin Community 3, NE NW SE 21-10n-2w, was in the Simpson at 7232 feet. Top of the Wilcox sand was found at 7216 feet.

A well which may encourage play along the east fault line of Edmond field is Ohio Oil Company's Messer 3, SW NW SW 32-14n-3w, which was taking a core. Top of the Wilcox sand was had at 6650 feet and drilled to 6705 feet, still in the formation. Early last week the well was acidized with 6000 gallons at 6640 feet and flowed 12 barrels of oil an hour, with a daily gas production of 12,448,000 cubic feet.

A small producer was completed in the Oklahoma City pool. Inland Development Company's Harn 2, near Northeast Fifteenth street and Stiles avenue, flowed 15 barrels of oil an hour with drill pipe in the hole. This occurred at 6530 feet in the Wilcox sand. The well may be completed there.

Hot weather curbs drilling results in Tulsa area

Tulsa.—High temperatures and numerous drilling difficulties were factors which forced oil activities in this sector of Oklahoma to a low point last week. Two of the most interesting wildcat tests in the area continued attempts at production and a small gas pool was opened.

Stanolind Oil & Gas Company and Amerada Petroleum Corporation's Billington 1, SW SE NE 32-9n-3e, which opened a new pool in Pottawatomie County over two weeks ago, was making a rather poor showing. The well was to plug back and acidize the Simpson after making less than 10 barrels of oil and some water per hour. It had the second Wilcox sand from 5314 to 5320 feet. Earlier in the week the well swabbed 100 barrels of oil in five hours, but showed a trace of salt water with the oil.

An east offset to the well was being started by Shell Petroleum Corporation, Stanolind Oil & Gas Company and Amerada Petroleum Corporation at Means 1, SWc SE 32-9n-3e. It was building rig corners and moving in materials.

Working On Thompson 1

Carter Oil Company et al's Thompson 1, CSL NE NW 34-2n-9e, old and widely publicized initial wildcat for the Centrahoma area of Coal County, continued on its way toward becoming a producer. In a 10-hour period, it pumped and flowed 127 barrels of oil through a tubing choke from the Viola lime. When last reported it had pumped 38 barrels of oil on pump and pumped off. Originally drilled to 7126 feet, the well was shut down for nearly a year, then plugged back and casing perforated in the Viola lime. The well flowed 200 barrels of oil in 20 hours through tubing earlier in the week.

C. W. Roodhouse et al's Booth 1, SE NW SE 20-2n-6e, closely watched test drilling about 3½ miles west of Fitts field, was to be plugged back and a test made of the Hunton lime. A saturated core was taken in this formation some two weeks ago. Salt water was present in the Bromide, and a core taken to 4966 feet was salty. Top of the formation was found at 4821 feet. The saturated Hunton core was taken from between 4360 and 4367 feet, and plug will be set at 4400 feet.

Muse Extended Again

E. H. Moore's Statler 1, SWc 34-2n-7e, gave the Muse area south of Fitts another extension in the direction of Jesse last week. The well had Hunton lime from 3790 to 4118 feet and made 308 barrels of oil in seven hours through casing. On an earlier test the well flowed 541 barrels of oil in 10 hours after being acidized with 10,000 gallons. Top of the Hunton was at 4100 feet. Tubing was to be run.

Between Jesse and the Muse area, Deep Rock Oil Corporation et al's Garrett 1, NEc SE 3-1n-7e, set seven-inch casing at 4290 feet and was taking down rotary tools. The hole is bottomed at 4490 feet in the Bromide.

A shot was to be run in Francis Oil & Gas Company's Provence 1, SW NW NW 2-1n-7e, which bailed 12 barrels of oil into tanks. The well filled 180 feet with oil in 21 hours from the Gilcrease sand between 1865 and 1880 feet.

Another Senora sand well was reported from Seminole County. J. F. Smith et al's Huddleston 3, SEc NE SW 32-7n-6e, at the south end of the Little River pool, drilled to 2974 feet and flowed 110 barrels of oil in nine hours. Huddleston 2, NEc SW 32-7n-6e, had a 24-hour flow of 172 barrels of oil.

New Gas Pool Opened

Haley & Moroney's Lake Moore 1, NWc SW 11-9n-11e, east of Fields pool in Okfuskee County, has opened a new gas pool, making 2,000,000 cubic feet from 2793 feet in the Gilcrease sand. Nearest production is in the Alabama pool, in Section 9-9n-11e.

Atlantic Refining Company's Dooley 1, SEc NW 9-11n-5e, in the Shawnee area of Pottawatomie County, was shut down after getting a show of salt water. The hole was reamed after recovering 11 feet of hard dry lime in a core between 4871 and 4885 feet. Top of the Viola lime was found at 4837 feet; top of the Dense at 4863 feet, and top of the Dolomite at 4869 feet. The well found the Wilcox sand at 4907 feet. Cored from 4910 to 4915 feet, it had a full recovery consisting of salty sand. The test and the salt water resulting therefrom were from 4915 feet.

A 60-barrel well in the Simpson lime was announced for Walker pool, west of Sapulpa in Creek County. Franchot Oil Company and Mid-Continent Petroleum Corporation's Franklin 1, SE NW SE 20-18n-9e, got its production from just below 3100 feet.

Carter Oil Company et al's Hamilton 1, CWL NE SW 33-4n-9e, in the Citra area of Hughes County, was coring be-

tween 6006 and 6010 feet. It had been shut down for several days while repairs were being made.

Continental Oil Company's Brown 2, NWc NE 11-1n-7e, Jesse, topped the first sand at 4573 feet and drilled to 4580 feet, where it flowed 327 barrels of oil in seven hours through tubing. It was shut in to take potential.

Well reported as "fizzle" flows 400 barrels of oil

Ardmore.—Southern Oklahoma might have been in the doldrums as was the rest of the state during the past week had it not been for one well, the surprisingly versatile Graham 1, in the old Doyle area of Stephens County. Other news included word of another test for the old Fox area of Carter County and three new starts for the Healdton field.

Helmerich & Payne's Graham 1, SWc NE 12-1n-5w, south of the old Doyle pool, a shallow producing area in Stephens County, despite recent and numerous reports that the well was a fizzle, flowed 710 barrels of oil in three days while runing tubing, and late reports in the Tulsa area said the well flowed 400 barrels of oil during the last 24 hours tested. The production was coming through a 64/100-inch choke on the tubing. The well has something like 1172 feet of sands, with present production coming from between 3785 and 3803 feet, where casing was perforated.

The test blew in unexpectedly several weeks ago with about 15,000,000 cubic feet of gas after having been temporarily abandoned. Originally drilled to 5014 feet, it was plugged back to between 4100 and 4250 feet and got salt water for its trouble. Success was attained with the last operation and it is considered good for about a 500-barrel producer when completed.

Gulf Stakes Test in Fox Area

A new test for the old Fox area of Carter County is Gulf Oil Corporation's Johnson 1, CSW NW 27-2s-3w, northwest of Carter Oil Company et al's Ruth Williams 1, in the same section. Derrick has been completed for the new test, which will drill to between 8000 and 9000 feet in search of the same production found in the Ordovician at Ruth Williams 1.

The starts for the Healdton field of Carter County were made by Magnolia Petroleum Company and are as follows: Dawson 1, SE NE SE 4-4s-3w; Richards 72, NW SW NE 6-4s-3w and Thompson 13, NW NE NW 9-4s-3w.

"Old Faithful" of the area continues to be Sinclair Prairie Oil Company's Stockton 1, SEc SW 26-6s-2w, in the Oswalt area of Love County. Longest active southern Oklahoma wildcat, the well has been producing an average of about 25 barrels of oil daily while cleaning out. It was shut in at 6920 feet and operators were hopeful that when opened, it might come in as a flowing well.

North of Brock, in southern Carter County, Shell Petroleum Corporation's Smith Estate 1, NW SW NE 30-5s-1e, was shut down for orders at 4222 feet in the Simpson. The well got two dry cores from between 4206 and 4222 feet, both consisting of green shale and gray lime.

Watching Continental's wildcat near Quinton

Tulsa.—Wildcat operators in Oklahoma perked up somewhat last week, making eight new locations and renewing activity at four tests.

Probably the most interesting of the ventures is Continental Oil Company's Anderson 1, SW SE NE 33-8n-20e, on the Kinta anticline in southern Haskell County, which has bored its way through 4187 feet of the Atoka series of the Pennsylvanian age. Top of the formation was found at 1350 feet and was last reported at 5537 feet, bottom of the hole. The test had the Horton coal at 830 feet. It topped the Horton sand at 833 feet and drilled to 1060 feet with no show before going into the Atoka.

Anderson 1 is northeast of the old Quinton gas field of Pittsburg County, opened in 1913 by Quinton Oil & Gas Company on the Kinta anticline. Quinton produces only a dry gas from between 1470 and 2729 feet. No oil has been produced in the pool. Surface elevation at Quinton is 600 to 950 feet, while in the Haskell County well, elevation from the ground was reported as being 571 feet. Stanolind Oil & Gas Company and Magnolia Petroleum Company have acreage near the test.

To Spud Southwest of Langston

Sunray Oil Company and Olson Drilling Company's Canning 1, SWc NE 31-17n-1w, southwest of the Langston pool in Logan County, a location, is situated on a surface and geophysical high. Sunray holds 860 acres around the wildcat. Major companies in the block include Sun Oil Company, Magnolia Petroleum Company, Gulf Oil Corporation, Ohio Oil Company and Mid-Continent Petroleum Corporation. Scheduled to go to the second Wilcox sand, operations are to begin not later than July 15. Many oil men believe the test is centered on a southwest trend from the Langston pool up in Sections 2, 11 and 12-17n-1w.

In Okfuskee County, Burke-Greis Oil Company's Rhea 1, SWc SE 14-10n-9e, at the southwest edge of the Beardon pool, was rigging up standard tools. Over in Okmulgee County, Lease Investment Company was completing Reneau 1, a wildcat in SW SE NW 4-13n-11e, for a pumper, making slightly less than 200 barrels of oil daily at 3169 feet.

Hughes County reported two wildcat starts, the first by The Texas Company at Cox 1, NE NW NW 23-9n-8e, northwest of Adams pool, which was a rig. W. O. Allen's Barnard 1, SWc 24-8n-8e, northwest of the Wewoka Townsite pool, was rigging up rotary.

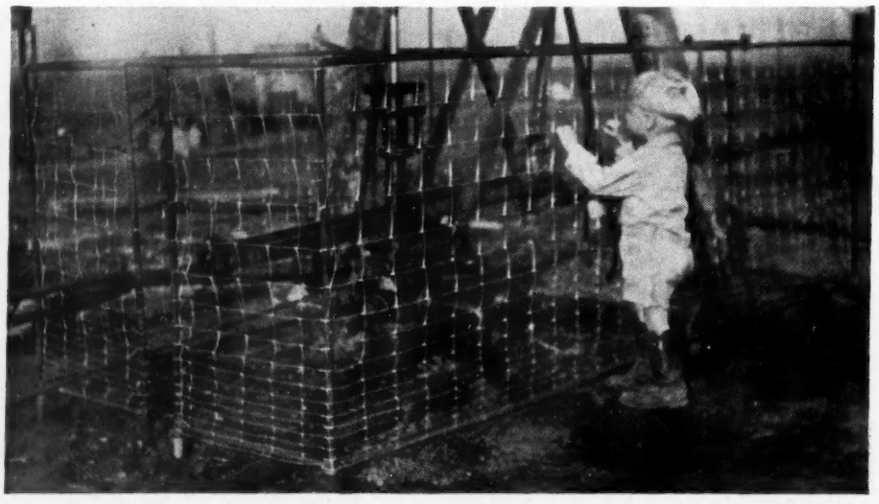
Shell Rigging Up

A test which will be followed closely is Shell Petroleum Corporation's Waddle 1, SW SE NW 36-15n-4w, just a few miles north of the Edmond pool, but in Logan County, which was building a rig. It is in a direct line between Edmond and the Crescent pool, and operators hope it will open more production on the prolific Nemaha ridge structure which extends on up into Kansas.

Three counties south, in Garvin County, Nels, Buffton et al's J. E. Burch 1, SEc SW 3-3n-1w, was also building rig. It is another try in the Pauls Valley area of the county, being a location northwest of that city. Also in southern Oklahoma, but much farther west, Tom Walker's Bowman 1, SWc NE 10-4s-17w, was waiting on cement at 20 feet. It is several miles southeast of Davidson and on the Red River in Tillman County.

Northeast of Headrick on the North Fork of the Red River, Ernest L. Lippert et al's Miller 1, NWc 4-2n-18w, had machine moved in and was digging cellar and pits. Down in Stephens County, two wildcats were rubbed off the books. Geo. L. Pace et al's Tah-su-dah 1, SE NW SW 27-1s-9w, was abandoned at 2707 feet. Northeast of Duncan, Wm. Angle et al's Sid Lang 1, SWc NE 24-1n-7w, was abandoned at 5027 feet.

Going north again, Higdon et al's Niemann 1, NE NW NE 9-26n-3e, Kay County wildcat, was completed for an initial production of 50,000 cubic feet of gas at a total depth of 519 feet. In Osage County, Midco Oil Corporation's No. 1, SEc NW 22-23n-6e, on the Arkansas River, was abandoned at 2992 feet.



Any youngsters on your lease? This is the way C. M. Young, lease owner in the new Airport pool near Tulsa, reduces accident hazards. The cage, constructed of heavy pipe and wire, is in two sections, rests in sockets formed of larger pipe and can be lifted out and set aside when operation of the well necessitates.

Oklahoma reports 46 new starts

Tulsa.—Oklahoma had 46 starts last week, 14 above the 32 reported the week before. Of the 51 completions in the state, 37 were oil wells with production amounting to 28,675 barrels of oil and 1 gas well made 37,000,000 cubic feet of gas. Thirteen wells were dry. Pontotoc County led the starts with 14; Carter and Okfuskee trailed second to make seven each. Seminole County had six and Garvin had three. There were two each for Hughes and Jefferson and one each for Creek, Jackson, Muskogee, Pottawatomie and Tillman Counties.

Tulsa citizens petition for right to drill in city

Tulsa.—The problem of drilling within the city limits was again raised here last week as 134 property owners of Tulsa filed a petition with the city commission asking either disannexation or ordinance revision.

The petition was submitted by individuals owning property west of Tulsa on the Sand Springs road. An explanation of the matter revealed the petitioners intended only unit drilling and not town lot drilling. Definite action by the commission was not forthcoming. Drilling within the city limits is prohibited by a city ordinance.

Indian lease auction brings slightly over $2 per acre

Muskogee. — The sale of restricted allotted Oklahoma Indian lands, held here June 29, netted a total bonus of $12,399.85 for 5,428.06 acres. Of the 117 tracts listed, 11 were withdrawn because of the death of the allottee or legal tangles, leaving 106. Seventy of these were sold and 35 passed.

Resumes Hearing

Oklahoma City.—The Oklahoma corporation commission resumed hearing June 29 of the application of Westgate-Greenland Oil Company and H. I. Grimes and others for an order canceling all overage and underage on several wells in the Oklahoma City field.

Pawhuska Indians not satisfied with lease bids

Tulsa. — Back when an auction of Osage leases resulted in a bonus total of millions, the tribal council promptly met, voted approval and left the white man to drill the holes. These millions, plus the others from royalty, brought the Osages to the economic status of the world's richest people. One year each headright drew down $13,500 under the protection and distribution of the Great White Father in Washington.

Tribal approval in whatever words the Indians use for saying "yes," was only a formality. Where was the incentive to say "nay" to an industry, which time after time laid down a million and more just for the privilege of drilling on a quarter section?

June 22 holders of the oil purse strings again went up to Pawhuska and the best Colonel E. Walters, the auctioneer, could do was to bring the total bidding on 5,240 acres to a paltry $8,975.

By June 26 the Osage tribal council got around to its formality and for the first time since 1915, when auctioneering was adopted for disposing of Osage leases, the Indians checked up to the Great White Father the matter of rejecting all bids. Harold L. Ickes, secretary of the interior, now has the proposition on his desk.

Wirt Franklin Petroleum Corporation creditors paid

Oklahoma City.—Creditors of Wirt Franklin Petroleum Corporation received $100,000 through an order issued in district court here June 29, bringing the amount paid since the company was placed in receivership in 1933 to $2,120,000. Distribution of the amount paid went 75 percent to bond holder judgment creditors and 25 percent to debenture judgment creditors. Regularity of payments has been unusual in federal receiverships.

Dickey refinery is sold

Wichita. — Sale of the McPherson, Kansas, refinery of Dickey Oil & Refining Company to Bay Petroleum Corporation of Denver, Colorado, was announced last week by Geo. P. Dickey, president. The 3000-barrel unit went at a reported price of more than $500,000.

New operations up in Kansas

Wichita.—Scouts in Kansas reported 56 starts last week, an increase of 12 over the 44 for the previous week, and completions reached a total of 50. Of these, 34 were oil wells making 46,823 barrels of oil and five gassers produced 52,000,000 cubic feet. There were 11 dry holes. Ellis County led in locations with 11; Rice and Russell counties tied for second with eight each. There were five each for Barton and Woodson, and four for Cowley County. Chautauqua, Ellsworth, Greenwood and Reno counties each had two and there was one apiece for Barber, Chase, Elk, Grant, McPherson, Stevens and Sumner counties.

Wichita.—The eleventh annual field trip and conference of the Kansas Geological Society will be held September 3 to 6 it was announced here last week. Dr. R. C. Moore, Kansas state geologist, will head the conference. He will be assisted by Dr. K. K. Landes, assistant state geologist; Robert Dott, Oklahoma geological survey and J. M. Jewitt, University of Wichita. The survey will cover Southeastern Kansas and Northeastern Oklahoma.

Wichita, Kansas. — Aldon Gasoline Company is to construct a vapor rectification type gasoline plant in Section 20-24s-4w, in the Stone sector of the Burrton pool of Reno County. Designing and construction will be done by Petroleum Engineering, Incorporated. The plant, which should be in operation within about 90 days, will handle from 5,000,000 to 10,000,000 cubic feet of gas daily.

OKLAHOMA
Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
CADDO COUNTY—		
Magnolia, Lackey 7, sw ne sw 11-5n-9w	100	3930
CARTER COUNTY—		
Heffner et al, Heffner 1, se sw se 4-1s-3w	*	3015
Simpson-Fell Oil, Merrick 2, nw se nw 9-2s-2w	2	1575
Merrick 3, se se nw 9-2s-2w	*	1601
Shell, McClure 51, ne ne sw 5-4s-3w	28	1097
Rockland Oil Corp., Sarasota 56, nw nw ne 23-4s-3w	25	1293
GARVIN COUNTY—		
Wrightsmith, Yates 4, se nw sw 33-1n-3w	¶37	2470
HUGHES COUNTY—		
Caprock, Parks 1, sw sw se 34-7n-8e (otd 250)	*	4616
JEFFERSON COUNTY—		
Circle Oil Co., Seay, nw sw se 3-7s-5w	60	1089
MUSKOGEE COUNTY—		
Robinson, Ragen 2, ne ne ne 19-13n-16e	25	2150
Foltz, Willingheur 2, cn½ se ne 20-13n-16e	*	2450
Mussellum, Fee 3, ce½ sw ¼ se 33-14n-19e	20	1358
OKFUSKEE COUNTY—		
Champlin, Maudie 3, sw se sw 7-10n-9e	*	1932
Ark Royalty, Brooks 6, se se sw 18-10n-9e	75	1895
Fisher 12, nw se se 18-10n-9e	30	1861
Blackwell-Phillips, Lehmer 4 "B", ne nw sw 18-10n-9e	30	1885
Sinclair Prairie, Fisher 12, sw ne sw 19-10n-9e	25	1852
Deep Rock, Palmer 3, sw se se 23-12n-11e (otd 2628)	101	3564
OKMULGEE COUNTY—		
Lease Inv., Taft 1, sw se nw 4-13n-11e	195	3169
Balise,, Fox 11, cne½ nw 22-13n-14e (otd 1830)	*	2522
Coyle, Sutton 10, nw se sw 33-14n-14e	*	1663
F. D. Bruce, Tiger 1A, nw se nw 30-16n-13e	*	1468
PONTOTOC COUNTY—		
Arrow, Lewis 2, sw sw se 19-2n-7e	1309	4111
Amerada, Wooley 15, sw ne se 21-2n-7e	1652	4339
Wooley 12, se se ne 22-2n-7e	150	3758
Sinclair Prairie, McCarty 2, sw nw ne 22-2n-7e	4084	3915
Vivian 2, nw se nw 22-2n-7e	867	3826
Getty, Masters 5, nw se nw 23-2n-7e	5059	3872
Moore, Frazier 2, se nw nw 23-2n-7e	270	3949
Navarro, Horn 3, sw nw nw 23-2n-7e	5101	3855
Magnolia, Burrus 14, nw se ne 27-2n-7e	463	2590
Bishop, Simpson 2-B, se nw nw 28-2n-7e	2726	3624
Stahl, Dennis 1B, sw ne nw 28-2n-7e (pb 3585)	2157	3632
Dennis 1C, sw ne nw 28-2n-7e	377	2580
Magnolia, Simpson 20, nw se ne 29-2n-7e	186	2620
Moore, Harper 1-B, sw sw ne 29-2n-7e	62	2610
Harper 6-B, se nw se 29-2n-7e	520	2635
Sandback, Norris 1, sw se sw 28-4n-6e	*	2795
POTTAWATOMIE COUNTY—		
E. W. Jones, Green 1, se se ne 35-7n-4e	360	4231
SEMINOLE COUNTY—		
P. Traugh, P. Anders 1, nw sw nw 23-6n-6e	*	2395
Phillips, Simon 2, cnw sw 5-7n-8e	168	4205
M. B. Smith, Walker B, ne nw nw 27-8n-7e	20	3195
Magnolia, Fee 4, nw sw sw 9-9n-7e	70	4078
Rogers O&G, Piolet 2, nw ne nw 16-9n-7e	88	3424
Amerada et al, Tilghman 2, nw ne nw 2-10n-5e	226	4649
Pioneer Oil, Edwards 1, ne se se 35-10n-7e	*	3702
Amerada, Martha 2, sw sw nw 26-10n-7e	1633	3701
Amerada-Stanolind, McGill 1, se sw se 35-11n-5e	378	4641
Mudge, Anders 1, sw nw nw 23-6n-6e	*	2380
STEPHENS COUNTY—		
Geo. L. Pace, Tah-su-dah, se nw sw 27-1s-9w	*	2707
Carter & Ring, Arn 13, ne nw ne 26-1s-5w	10	650

*Failures; †Junked; ¶Million cu. ft. gas.

KANSAS

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
BARTON COUNTY—		
Empire, Wittig 2, nw ne nw 16-16s-13w	1050	3391
Skelly, Bloomer 9, sw se ne 36-17s-11w	4565	3070
Gulf, Sessler 1, ne ne sw 24-20s-11w	2216	3253
Texas, A. Henning 1, ne ne sw 22-19s-11w	140	3115
Lario et al, Peter, sw nw nw 24-20s-11w	2376	3270
Texas, S. McLean 2, sw se ne 25-17s-11w	1224	3316
BUTLER COUNTY—		
W. O. James, Fee 1, sw ne nw 17-24s-5e	*	2568
Richmond Drlg. Co., Rose 1, sw se nw 17-27s-6e	35	2755
CHAUTAUQUA COUNTY—		
Barbara Oil Co., Gorham 2, sw se nw 23-32s-10e	2	1929
Sagamore, Willson 11-A, ne sw ne 14-33s-12e (pb 1148)	¶25	1950
Buffington & Cohen, Hays 1, se ne se 10-33s-13w	*	1808
COWLEY COUNTY—		
Tulsa Oil et al, Dillow 1, nw nw ne 28-34s-3e	*	3396
ELLIS COUNTY—		
Deep Rock, Baumer 5, nw sw nw 27-11s-17w	3034	3494
Wentz, Inc., Bemis 1, ne ne nw 28-11s-17w	1623	3426
Lario, Walter 2 "C", sw sw se 2-12s-18w	1424	3643
ELK COUNTY—		
Guy T. Berry, Zimmerman 1, sw ne se 15-30s-10e	*	2031
Diller O&G Co., Miller 1, nw ne sw 25-31s-10e	*	2322
GREENWOOD COUNTY—		
Lykes et al, Beauchat 1, sw sw ne 5-24s-12e	15	1814
McPHERSON COUNTY—		
H. & M. Drlg. Co., Sellar 3, se sw ne 31-19s-1w	¶6	2976
Palmer et al, Regier 1, se ne nw 13-21s-1w	*	3438
Derby & Wentz, Goering 8, se se ne 17-21s-1w	88	3360
Dickey Oil et al, Goering 9, nw ne se 17-21s-1w	525	3332
MORTON COUNTY—		
Kuhn Bros., Armstrong 1, cse ¼ se 16-34s-39w	¶9.5	2760
RENO COUNTY—		
Wilcox, Manford "A" 2, sw nw sw 12-23s-4w	453	3418
Natl. Pet. Co., Tucker 5, se sw ne 19-24s-4w	1393	3388
Empire, Scheuchzer 5, sw se nw 20-24s-4w	464	3391
Davis et al, Vansickle 1, nw nw nw 21-24s-4w (pb 3359)	137	3362
RICE COUNTY—		
Empire, Prochaska 7, nw nw se 31-18s-7w	*	3249
Skelly, Dittmers 4, se se sw 28-19s-10w	1268	3277
Texas, C. Kleile 8, nw se sw 34-19s-10w	1407	3327
Republic, Wendell "B" ne ne se 32-19s-10w	2059	3278
Union Oil & Roy. Co. et al, Baker 1, sw sw ne 33-20s-6w	*	3855
J. H. Tatlock, Berscheidt "A", se se sw 6-20s-10w	1792	3298
Reserve Dev. Co., H. R. Patton 6, sw ne nw 16-21s-7w	1781	3380
RUSSELL COUNTY—		
Shields et al, Letsch 1, ne ne se 27-14s-13w (pb 2900)	1293	3117
Empire, Strecker 3, ne nw ne 35-14s-14w	413	3182
Strecker "B" 1, ne ne ne 36-14s-14w	351	2971
Crawford 15, ne se sw 2-14s-15w	*	3423
Central Pet. Co., Foster "B" 6, nw se ne 3-14s-15w	2812	3308
Texas, Dumler 3 "A", nw ne se 1-14s-15w	2478	2962
Wolf Creek Oil Co., Mills 3, ne se nw 10-14s-15w (pb 3284)	15	3287
W. I. Southern, Inc., Bloomhaur 6 "A", nw sw ne 30-15s-13w	2251	3276
Gulf, Hoffman 3, ne se sw 31-15s-13w	1860	3293
Phillips, Hoffman 10, ne sw se 31-15s-13w	2809	3335
Coralena, Deines 1, ne ne ne 36-15s-14w	2680	3282
SCOTT COUNTY—		
Atlantic, Mark 1 "C", cne se 15-20s-33w	*	5490
SEWARD COUNTY—		
United Prod. Co., Young 1, csw 5-31s-34w (pb 2647)	¶2	2875
STAFFORD COUNTY—		
Atlantic-Phillips, Pound 1, ne nw ne 27-24s-13w (pb 4119)	790	4121
STEVENS COUNTY—		
Panhandle Eastern, Youngren 1, cne 13-32s-39w	¶9.5	2800
SUMNER COUNTY—		
Graham et al, Allen 1, nw nw nw 4-33s-2w	*	4255

*Failures; †Junked; ¶Million cu. ft. gas.

Comfort and "style" are believed to be essential by the day crew on Erle P. Halliburton Inc.'s Bagwell 1, a deep test in Pushmataha County, Southeast Oklahoma.

In the picture, reading from left to right, are W. W. Montgomery, driller; Bob Davis, back-up man; Carrol Jacobs, Cat-head man; L. O. Tice, pipe racker, and R. A. Childers, derrick man. Jack Halliburton (top) is superintendent and Hillard W. Carey (below) is geologist. Bagwell 1 is located on a surface structure. The block, which is owned by Erle P. Halliburton of Duncan, Oklahoma, contains some 19,000 acres.

The drilling rig, which is also owned by Halliburton is unique, the outstanding feature being the type of draw works used. The drum is equipped with air operated brakes, controlled by an air-pressure valve. Note the instrument control board to the right of the driller.

By means of a combined system of clutches the driller is able to alternate the speed of the drum instantaneously while under load and with the engine running at any rate of speed. The clutches are air operated and controlled by only one valve.

J. D. JERNIGAN, manager of the aviation division of The Texas Company; R. L. Saunders, assistant sales manager of the company, and R. J. Hall, northwestern manager of the Texaco aviation division, last week flew from Butte, Montana, to Calgary, Alberta, where they were guests of C. D. Meltaberger, Calgary manager for The Texas Company of Canada. From Calgary they went to nearby Banff for a few days of golf.

KANSAS FIELDS

Several extensions recorded; two discoveries loom.

* * *

Stanolind test may open field east of Ellinwood.

* * *

Syracuse Dome wildcat runs high on Pennsylvanian.

Wichita. — Drilling in Kansas last week continued strong and steady without being spectacular. Extensions were made to half a dozen pools and new producing areas appeared possible for two counties. On the western border of the state, a test on the long-ignored Syracuse dome was drilling ahead.

Craft's Wildcat Fills 1000 Feet

C. R. Craft et al's Barnholt 1, (formerly carried as Bradley Bros. et al's) at SWc SE 30-20s-5w, in southwestern McPherson County, filled 1000 feet in nine hours from chat between 3292 and 3331 feet and was cleaned out. In the following four hours, it refilled 1500 feet with oil and was being tested. The well started out early last week filling 1000 feet with oil through some 14 feet of cavings, and continued to fill while being bailed. Nearest production is in the Welch pool of Rice County, to the west. It looks like a pool opener.

Stanolind May Open Pool

Stanolind Oil & Gas Company's Schartz 1, in Section 33-19s-11w, three miles east of Ellinwood in Barton County, may give that area a new pool. The well found the top of the Lansing lime at 3075 feet and had a good show of oil in a core between 3085 and 3105 feet. A drill stem test is scheduled.

Twin Drilling Company's Madden Estate 1, NEc NE 29-11s-17w, came into production last week to give the rapidly growing Bemis pool of Ellis County another extension, this time to the southwest. It tends to establish a link between Bemis and the recently opened Marshall pool. The well swabbed 10 barrels of oil on a preliminary test and was to be acidized for a pumping test. First oil was had from 3538 to 3542 feet and it was carried to a total depth of 3548 feet in the Siliceous lime.

Shell Extends Trapp

Shell Petroleum Corporation's Schneider 1, CNL S½ SE 12-16s-14w, extended the Trapp pool of Russell County over into Barton County, getting a saturated core from 3329 feet in the Siliceous lime. First show in the formation was found at 3323 feet. It was later reported to have found some water in the formation and was drilling at 3347 feet.

Reno County reported important developments in two pools. James Davis' Van Sickle 1, NWc 21-24s-4w, extended production one-quarter mile southeast in the Burrton pool making 137 barrels of oil and some water in the chat at 3359 feet. Additional drilling on the east side of the Haven pool was assured when Olson Drilling Company's Nelson 4, SW SE NW 30-23s-3w, was completed for 801 barrels of oil. The pool was given a quarter-mile north extension with the completion of Carter Oil Company's Hogan 6, in Section 19-24s-4w. It swabbed 95 barrels of oil in seven hours from the chat at 3390 feet the total depth. It was to be acidized.

A north extension of the Welch pool of Rice County looks certain with continued favorable shows being reported from Long, Obins and Nadel's Hubenett 1, SW NW SW 23-20s-6w. The well swabbed 100 barrels of oil in four hours and swabbed dry. Left to stand, it had a refill of 2000 feet, the oil coming up through cavings. Production is from between 3325 and 3366 feet in chat. Mid-Continent Petroleum Corporation's Hubenett 1, NW SW SW 22-20s-6w, spudded and set surface pipe. It is one section west of the above potential producer. It was to start up June 30.

Hamilton County Wildcat High

Barnsdall Oil Company, Denver Producing & Refining Company et al's Porter 1, SWc NE 30-25s-41w, on the Syracuse Dome in Hamilton County, western Kansas, was reported running about 130 feet higher on the Pennsylvanian than a well to the southwest, drilled several years ago. Drill pipe was stuck in the hole at around 4390 feet, but was freed and operators were continuing to make hole. Considerable attention was paid the well when it first started as it is located on what is said to be the only complete closure in the state.

Twin Drilling Company's Karlin 1, NE NW SE 6-12s-17w, may be completed as a link well, being located midway between the Shutts and Marshall pools of Ellis County. It pumped 1065 barrels of oil in 16 hours from the Siliceous lime at 3677 feet following acidization. Operators feel the well will establish a much larger potential after new pumping equipment is installed.

Production was on the increase at Barber County's new pool opener, Pryor & Lockhart's Gant 1, CSE 7-31s-13w, northwest of the Whelan pool. During a 12-hour period, the well made 771 barrels of oil, flowing against a back pressure of 20 pounds on the separator. It was showing about 30 percent basic sediment. Top of the Viola lime was found at 4433 feet and it was drilled to 4438 feet, where it was acidized with 2500 gallons. Operators were looking forward to completing a very good producer as the water was decreasing steadily.

Rose Drilling Company et al's Gray 1, NWc 11-24s-13w, 1½ miles north of production in the St. John pool of Stafford County, topped the Viola lime at 3824 feet and later cored a show of oil. Casing will be run before testing.

1581-Barrel Potential

Carter Oil Company's Josephine 2, in Section 7-15s-13w, in the Coralena pool of Russell County, established a potential of 1581 barrels of oil daily from the Siliceous lime. The well made 934 barrels of oil in 12 hours, averaging 83 barrels of oil during the last five hours.

Atlantic Refining Company was having trouble getting production at Runyon 1, SW NW SE 11-27s-13w, northwest of Pratt, in that county. The well had a rainbow show of oil from 3917½ to 3923 feet in the Kansas City lime, where casing was perforated. It is thought the formation may have been sealed off.

Stanolind Oil & Gas Company's Panning 1, SWc SE 2-20s-11w, north offset to the discovery producer in Kowalsky pool, Barton County, filled 3000 feet with oil after the plug was drilled and the hole drilled ahead to 3281 feet in the Siliceous lime.

Simpson Oil Company and Skelly Oil Company's Hewson 1, SEc SW 13-21s-7w, northwest of Larned in Pawnee County, was to be abandoned at 3886 feet in the Siliceous lime. Top of the formation was had at 3884 feet. Showings of oil and gas were found in the Simpson, but not in commercial quantities.

Eight exploratory tests taken from drilling list

Wichita.—One of the most interesting wildcats recorded in Kansas last week was F. L. Thorn et al's Dix 1, SEc SW 31-14s-24w, a rank wildcat about eight miles south of Bosna in Trego County. Nearest production appears to be far to the northeast in the Riga pool. The well was drilling ahead below 560 feet.

Other counties in the western part of Kansas sent in their quota of starts. Rotary rig was being built for Helmerich & Payne et al's Sessler 1, SWc SE 29-20s-11w, southwest of production in the Ellinwood and Peter pools of Barton County. A renewal in the county was Hana et al's Luce 1, SWc 21-20s-13w, several miles northeast of the Hiss pool. It was spudding.

Several New Ellis County Wildcats

Ellis County had its portion of new wildcat operations, one of them evi-

dently intended to extend the western boundary of the Marshall pool. It was Vickers Petroleum Company et al's Parker 1, CN/2 NE NW 35-11s-18w, one location west of the pool. Northeast of Bemis pool, Empire Oil & Gas Company was rigging up rotary for Hall 1, NEc 14-11s-17w. Lario Oil & Gas Company's Bell 1, NWc NE 8-12s-18w, was moving in materials. It is located southwest of Walters pool.

Woodson County reported one start and one renewal. The start was Fred Rapp's Houghland 1, NWc SE 2-25s-15e, just north of Yates Center. The renewal was B & B Oil Company's Lockhard 1, NWc NE 2-26s-13e, north of the Toronto pool, drilling at 650 feet.

Word of another new wildcat also came from Kiowa County, where Stanolind Oil & Gas Company and Amerada Petroleum Corporation were rigging up rotary for Pyle, Jr., 1, CNW NE 8-29s-16w. It is six miles north of Belvidere.

E. H. Moore, Incorporated, et al's Waco 1, SWc NW 29-29s-1e, northeast of Peck and south of the Robbins pool of Sedgwick County, was digging ponds. Over in Elk County, Morgan et al's Cook 1, NWc 29-30s-12e, was drilling at 563 feet. It is at the west edge of the Longton gas pool.

Crawford et al's Jones 1, NWc 35-17s-16w, was a rotary rig north of the Otis gas and oil pool of Rush County. In Harvey County, Bell Oil & Gas Company and others renewed operations at Austin 1, SE NE NE 28-23s-1e. It is south of Newton and was rigging up rotary.

Eight Abandoned

Eight wildcats were taken off the list last week, all of them in different counties. Starting in Barber County, Colonial Oil Company had moved in materials for J. W. Blunk Estate 1, NEc 13-34s-14w, about six miles east of the Aetna gas pool, but finally abandoned the location. In Chautauqua County, Buffington & Cohen's Hayes 1-A, SE NE SE 10-33s-13e, east of the Longton gas pool, was abandoned at 1808 feet. Cowley County's failure was Tulsa Oil Company et al's Dillon 1, NWc NE 28-34s-3e, east of Gueda Springs, which was plugged at 3396 feet.

Northeast of Oberlin in Decatur County, C. L. Bruce et al's Newbold 1, CNE SW 34-2s-28w, was an abandoned location. Elk County evened up on its new location by abandoning G. T. Berry's Zimmerman 1, SW NE SE 15-30s-10e, southwest of Howard at 2031 feet.

In McPherson County, Tom Palmer et al's Regier 1, SE NE NW 13-21s-1w, northeast of the Graber pool, abandoned at 3438 feet. Union Oil & Refining Company et al's Baker 1, SWc NE 33-20s-6w, west of Welch pool, went as far as 3855 feet and was abandoned. It was in Rice County.

Last of the bad wildcat holes was The Texas Company's Harper 1, NE SW SE 9-30s-3w, about six miles west of the Latta pool. It tried valiantly to make a well, plugging back first to 3835 feet. Having no success there, the well was carried ahead then plugged back to 3898 feet where it was acidized with 2000 gallons and swabbed eight barrels of oil. After further testing, it was drilled to 4385 feet where it was abandoned.

NEW MEXICO

Lea County north trend wildcat tests swab salt water.

* * *

Monument east edge well flows 130 barrels per hour.

Hobbs, N. M.—Two semi-wildcats on the north trend of production for the sandy-lime belt, Lea County, swabbed sulphur water when tested in the equivalent of the Hobbs lime section. The Texas Company's Ellen Weir 1, C NE NE 14-20s-37e, originally halted about one year ago at 4074 feet after failing to make a commercial producer, deepened to 4210 feet, and swabbed 32 barrels of sulphur water per hour. Stanolind Oil & Gas Company's Turner 1, C NW NW 20-20s-38e, drilled to the upper section of the lime at 4072 feet, and also swabbed water. Both showed a limited volume of oil after acidizing the sandy-lime zone. Continental Oil Company et al's Burger 1, C NW SW 19-20s-38e, east offset to the northernmost producer in this area, gauged 52 barrels of oil in 12 hours through ¾-inch choke after nitro shot and acid at 3872 feet.

130 Barrels Per Hour

East edge location for the Monument field contributed a big producer when Ohio Oil Company's State-Hansen 2, C W½ SW NE 16-20s-37e, started off flowing at rate of 130 barrels hourly natural through tubing from lime at 3868 feet, but separator could not accommodate the oil and gas yield. The well was throttled to 90 barrels per hour on 39/64-inch choke, with gas flow estimated at 1,500,000 feet daily.

NEW MEXICO Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
LEA COUNTY (Eaves)—		
The Texas Co. et al, C. W. Shepherd 4-B, c se 5-26s-37e	¶8½	3200
LEA COUNTY (Eunice)—		
Humble, L. C. Fopeano 1, c se sw 25-20s-36e	400	3850
The Texas Co., State-Lieu 9, sw sw sw 19-20s-37e	500	3873
LEA COUNTY (Hardy)—		
Continental et al, W. D. Burger 1, c nw sw 19-20s-38e	100	3872
LEA COUNTY (Monument)—		
Gulf, Bates 1, c se se 26-19s-36e	85	3973
Sun, J. L. Barr 1, c sw sw 24-19s-36e	50	4032
LEA COUNTY (Penrose)—		
J. E. Farrell et al, Walden 2-C, c se sw 15-22s-37e	100	3720
LEA COUNTY (Skelly)—		
Samedan Oil Corp., S. B. Hughes 3, c ne se 4-23s-37e	32	3631
LEA COUNTY (Wildcat)—		
Illinois Oil Co., S. Alton-Conoco 1, c sw ne 31-17s-37e	*	5302

*Failures; †Junked; ¶Million cu. ft. gas.

The company's north offset was likewise a prolific well, but a south offset developed water with a light oil flow at 3870 feet, or 325 feet sub-sea. The new completion was drilled to 315 feet sub-sea, and lost returns for 2½ hours while drilling in at 3814 feet. Sun Oil Company's Barr 1, C SW SW 24-19s-36e, failed to yield its proration quota in completing at 4032 feet, or 351 feet below sea level. Acid was used twice and the well flowed 72 barrels fluid, 20 percent water, initial on 23/64-inch choke.

Phillips Petroleum Company's Britt-Hobbs 3, C SW SW 18-20s-37e, offsetting production on the south line of the Monument area, encountered poor porosity in drilling to 3870 feet, with an elevation of 3550 feet, and the well failed to flow after using 13,000 gallons of acid solution in three applications.

Magnolia Petroleum Company's Hanna 1, wildcat in the southeast part of Lea County, was drilling up bailer at 3757 feet. No water has been reported, although it is running low on structure. In the nearby Langlie field, Gulf Oil Corporation has started operations on Elliott 1, SW SE SE 15-25s-37e, offsetting production. The Texas Company et al's C. W. Shepherd 4-B, C SE 5-26s-37e, located northwest of the Rhodes area, failed to exclude water when tested at 3200 feet, and has been completed for 8,500,000 feet of sweet gas after plugging back to 2960 feet.

New operations in the Mattix area includes Empire Oil & Refining Company and Atlantic Refining Company's Hodges 1, NE NE NE 8-24s-37e, and Western Gas Company's Harrison 4, C SE SW 29-24s-37e. McDowell & Weiner have succeeded J. L. Perry et al in the drilling of Elliott 1, SE SE SE 19-21s-37e, Hardy sandy-lime area. In the Penrose field, Gulf Oil Corporation has started operations on Stitcher 1, C SW SW 4-22s-37e.

Sun spuds deep wildcat project in Washington

Portland, Oregon.—Sun Oil Company has spudded a projected deep wildcat on the Bloedel Ruddock tract, Clallam County, Washington, after extensive geological work on its 15,000-acre block. Location is near Forks and in the northwestern part of the state. R. L.

Marston, superintendent for the company in Southwest Texas, brought two rotary crews from Texas to drill the test, which is the first for the company in the Pacific Northwest, although it has maintained a land and geological office in the Public Service building, Portland, for about five years.

University quarter sections bring as much as $34,000

Austin.—Leases to West Texas lands owned by the University of Texas brought prices ranging from $200 to $35,000 a quarter section at the University land leasing auction last week.

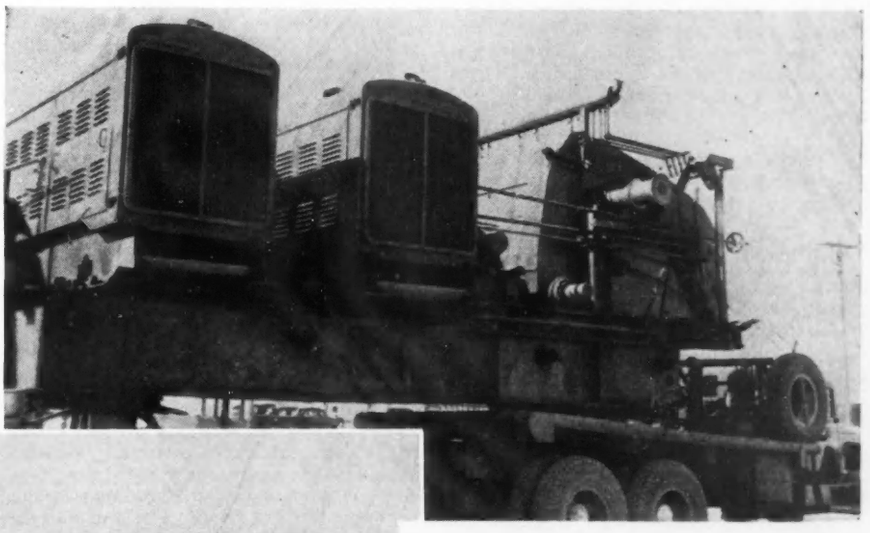
The high price of $34,000 was paid by E. E. Fogelson for a quarter section in the northeast quarter of Section 14, Block 35, Crane County. Fogelson paid $32,000 for another tract in Ector County and his bid of $6,000 on the adjoining quarter section in Crane County was refused by the board.

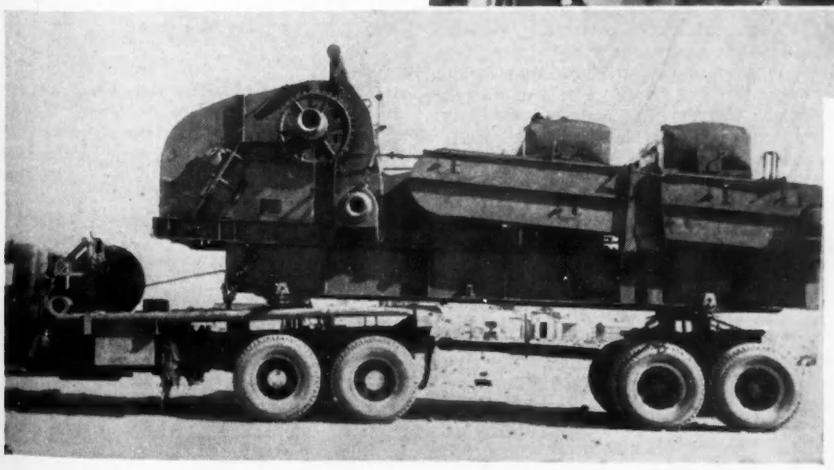
Four tracts offered in Upton County and two in Crockett County were passed up by the bidders. Four tracts in Pecos County were purchased by Clayton Williams at the lowest prices paid at the auction ranging from $200 to $700 a quarter section. All the other tracts offered in Crane, Ector and Andrews counties brought substantial cash bonuses.

THOMAS W. LEACH, Tulsa, Oklahoma, geologist, has joined the seismograph test crew making a survey of the Nesson flats field in western North Dakota for the Standard Oil Company of California. The crew, under the direction of F. L. Bishop, Dallas, Texas, started operations a month ago.

Largest Truck Load

Out west of the 103rd meridian (New Mexico), where too much of the railroad lobby has not worked too many tricks, a man loads his truck like it belonged to him. The two views show a truck loaded with a unit weighing 84,000 pounds. This is supposed to be the largest load of iron moved to the oil fields in the United States by regular truck and equipment. The unitized rig consists of a draw works, clutch, and two Diesel engines. The unit belongs to Trinity Drilling Company, and has been used on a number of wells in the Hobbs and Monument, New Mexico, area. B. G. Walker owns the truck on which the unit is riding. It is said that $2000 has been saved by virtue of being able to haul it as a unit as compared with dismantling and reassembling to break it up into loads required in Texas and other states.





NORTH AND WEST TEXAS

Wasson area development insures early pipe line outlet.

* * *

Two wildcats in Gaines County showing good structure.

* * *

Jones County wildcat completing as oil producer.

Midland. — Isolated oil producing areas and wildcat projects in the north portion of the Permian basin are commanding the bulk of the attention centered upon West Texas developments. Recent addition of the Wasson area, with natural flowing production, assures the immediate entry of one or more major trunk lines to serve fields in process of development in Gaines, Yoakum and Cochran counties. Record drilling time on tests now underway in the above and adjoining counties forecasts completion of wells in the 5000-foot lime within 30 days elapsed time, although efficient equipment is necessary to maintain this speed.

The Wasson area, uncovered by Amon G. Carter and Continental Oil Company's Wasson 1, SW SW NW PSL Section 48, Block A-X, caused the starting of four tests in a northeast-southwest trend, due to short-term leases, before the original project was completed at 4959 feet. Two additional tests were later authorized by Phillips Petroleum Company et al to the west and northwest, while southwestern Yoakum County has gained four active tests on a northwest trend play. Amerada Petroleum Corporation's Matthews 1, NEc Section 417, Block G, 1¼ miles southwest of Wasson 1, is due to become the next completion for the area,

having recorded a normal structural position in drilling to 2940 feet, with protection string of 9-inch pipe cemented at 2934 feet. Base of salt was logged at 2819 feet, or 738 feet above sea level. Amerada Petroleum Corporation holds lease on 6¼ sections to the west of the Wasson discovery and its own test, and because of lease expiration has rigged up rotary to drill C. M. Armstrong 1, C NW NW Section 456, Block G, about three miles west of Matthews 1. Potential gauge on Wasson 1 was 332 barrels of 34.4 gravity oil and 6,640,000 feet of sulphur gas through open casing and tubing, and production is being used as fuel for drilling other tests.

Low structural position of Carter and Continental Oil Company's Langdon 1, near SE SE NW PSL Section 44, about three miles northeast of the producer, lessens the production possibilities of this section of the Wasson area. Drilling was underway at 3630 feet after logging base of salt at 2970 feet, or 577 feet above sea level.

Gaines County Tests Favorable

Two wildcats seeking production on the same geological feature in northwestern Gaines County maintained their favorable structural position while drilling ahead the past week. Continental Oil Company's Jones 1, C SE NE PSL Section 22, Block A-7, was drilling lime at 4800 feet, and Argo Oil Corporation's Jones 1, C NE Section 2, 4¼ miles north by east of the former, topped salt at 2215 feet, or 1454 feet above sea level, and was drilling at 2560 feet.

Surface pipe was cemented at 304 feet by The Texas Company's W. F. Walker 1, C SE SE Section 794, Block D, first of the quartet of previously announced locations for southwestern Yoakum County. The ground elevation is 3644 feet. Rotary has been rigged up for Denver Development Company's Whittenburg 1, NWc Section 831, Block D. Work is also underway on Lou G. Stogner et al's M. West 1, near C SE NW Section 606, Block D. Magnolia Petroleum Company's Taylor 1, wildcat in northeast part of the county, was drilling in extremely hard lime at 4650 feet.

In the Bennett field, Texas Pacific Coal & Oil Company's Bennett 2, NWc Section 678, Block D, was drilling at 5060 feet, while Honolulu Oil Corporation's Bennett 1, west offset, was successfully clearing up fishing job at 4800 feet.

The Texas Company's C. C. Slaughter 1, Cochran County wildcat contracted last March, has rigged up rotary. Location is 3000 feet east and 200 feet north of SWc League 130, Carson County School Lands, and about ½-mile east of Continental Oil Company's 5000-foot failure, which filled 700 feet with oil from lime at 4878-85 feet. Ground elevation of the new test is 3795 feet. M. S. Ingleright et al's Duggan 1, about ⅜ mile northwest of the discovery oil well of the Duggan area, Cochran County, spudded June 6, and has cemented 7-inch pipe at 4800 feet to complete. It is credited with being slightly higher on structure than the producer. In Hockley County, R. F. Duggan et al's Yellow House Ranch 1, Labor 11, League 718, Capitol Syndicate Lands, spudded June 14, and was drilling below 3900 feet, according to a late report. R. L. Foree et al's A. E. Pool 1, north central Terry County wildcat, was drilling at 3000 feet, with an elevation of 3447 feet.

Andrews County Show

Saturated lime logged by Empire Oil & Refining Company's Biles 1, C SW SW PSL Section 12, Block A-31, northwestern Andrews County wildcat, enhances the outlook for the development of an oil producing area. Show of oil was logged at 4577-85 feet, with an elevation of 3395 feet, and porosity improved in coring to 4615 feet. Amerada Petroleum Corporation's Littman 1, C NW NW PSL Section 6, Block A-29, near west edge of the county, was drilling at 4160 feet. Geological markers place this wildcat about level on structure with an inactive pumper across the border in New Mexico.

Rogers & Rogers' T. P. Land Trust 1, ¾-mile southwest of production in the Goldsmith field, cored saturated lime at 4233-46 feet, with an elevation of 3231 feet, but was abandoned in water at 4333 feet due to mix-up in spotting the location, and a second test will be drilled. Original location called for 330-foot spacing out of the NEc Section 45, but rig was set up on the corner of the section through an error. The mistake was not discovered until the oil horizon was reached.

Jones County wildcat's sand may be good in nearby fields

Abilene, Texas.—Northeastern Jones County has a wildcat in process of completion as an oil producer from a new horizon that has potentialities in the comparatively shallow fields and pools in the east portion of the county. Iron Mountain Oil Campany and Humble Oil & Refining Company's Carl Olander 1, NEc SW¼ Section 196, BBB&C Ry. Survey, about three miles east by north of Avoca and six miles north of the Leuders 2050-foot field, provided the new development by heading 39 gravity oil from sandy-lime at 3241-3244 feet, with an elevation of 1560 feet. Formation has been tentatively identified as the basal Canyon series, according to Harold G. Neely, president of Iron Mountain Oil Company, and samples indicate that it will respond to acid treatment. A string of 5½-inch pipe has been cemented at 3239 feet, and plugs are due to be drilled early this week.

Iron Mountain Oil Company originally launched the Avoca area wildcat as a regular Jones County test, using geology worked by Jones & Stasney, who have been successful in building up production in the Jones-Shackelford County district. Humble Oil & Refining Company held lease on most of the surrounding acreage, and acquired one-half interest in the project to convert into a deep test. Other lease owners are: Danciger Oil Refineries, Inc., Fain-McGaha Oil Corporation, Jones & Stasney, Maracaibo Oil Corporation and Ungren & Frazier. Preliminary showing made by Olander 1 will encourage deeper drilling by future wildcats, and possible deepening of wells in old fields.

New Sandy Ridge Pay

A new oil horizon for the Sandy Ridge structure, Jones County, materialized last week when Oil States Exploration Company et al's J. H. White 2-B, NW NE NW T&P Ry. Section 6, Block 15, pumped 190 barrels potential from sand at 1742-52 feet after plugging back one foot. It failed to exclude all bottom hole water. It has an elevation of 1707 feet. Location is a short distance northeast of the company's White 2, which made a 107-barrel pumper from lime at 2329-39 feet, establishing a new producing depth for the Sandy Ridge area, which heretofore has produced from 1900-foot sand.

Ten-acre spacing asked for El Tanque field

Austin.—A request for a 10-acre spacing rule for the El Tanque field in Starr County was being studied by the Texas Railroad Commission. Sun Oil Company, through its engineer, F. E. Heath, told the commission that the field was now being developed on the state-wide rule which describes that wells shall be 150 feet from lease lines and 300 feet apart. He thought an experience with similar fields was sufficient to justify a 10-acre spacing rule at the very least.

The request was opposed by Dod and Wood and Carter and Sternberg, two companies owning the rest of the productive acreage in the area.

Dod and Wood have drilled three wells under the state-wide plan and are drilling a fourth. Carter and Sternberg are drilling two, one of which is on the state rule. Sun has drilled one as an offset to the Dod 1.

Since Dod and Wood did not put on any evidence, and Sun's one well was dissimilar from the Dod wells, there was very little before the commission upon which to base a spacing rule.

The wells were brought in at around 1765. The three Dod wells are good flowing wells which had an allowable of 125 barrels on last month's schedule with an oil of 24.2 gravity. The Sun well, 300 feet from the Todd 1, is a pumper; the oil is 22.6 gravity and lighter in color. Sun got only 10 feet of sand, as contrasted with 13 to 28 feet in the other three producers.

Dod and Wood told the commission that having drilled these four wells, they planned no more on this lease but were going to drill four more in an attempt to define the limits of the field. After these limits have been determined, they feel it will then be time to talk about spacing rules. Carter and Sternberg concurred in this view. Production Chief V. E. Cottingham, before whom the hearing was held, expressed doubt as to the wisdom of following the state-wide rule inasmuch as it would be difficult to change the pattern after it is well established.

Tulsa. — Repressuring program for the old Bethel pool of Seminole County is due to start shortly, operations there to be handled by Phillips Petroleum Company. Most wells to be treated are in 9n-8e. Six input wells are to be drilled and an old booster plant of Mid-Continent Petroleum Corporation will be used as a pressure plant.

C. T. FILLAN, Calgary operator, has returned from a trip to Seattle and Vancouver, where he conferred with associates regarding a drilling program in the Pekisko area. Drilling on Section 33, owned by W. S. Henderson and Fillan, is to be started this summer.

WEST TEXAS—NEW MEXICO NUMBER

OF

THE OIL WEEKLY

JULY 19th

Extra copies should be ordered now!

EDITORIAL FEATURES OF THE ISSUE:

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Wildcat in southwest Young County yields Caddo lime oil

Wichita Falls.—Southwestern Young County recorded a new oil area from the Caddo lime section through the wildcat efforts of Henry Zweifel et al's E. S. Graham 1, near center of north line of Section 1, B.S. & F. Co. Survey, A-44, rated at 300 barrels initial after acid. Production is from nine feet of saturation topped at 3483 feet, and the formation was treated with 5000 gallons of acid solution to develop a steady flow. The well is showing salt water with the oil production.

Zweifel et al holds lease on about 4000 acres in the area, and have started a north offset on the W. Buford tract, Lot 4, John Saunders Survey. This new strike is about two miles west of a 32-barrel wildcat completion by C. V. Welch and Christie Bros. on the A. B. Street tract, and is 2¼ miles south of Nash & Windfohr's Graham field. Sinclair Refining Company, pipe line division, has connected to the new completion.

Set Rock Crossing Water Level

The ninth oil producer from the upper Canyon lime and sand series uncovered early this year in the Rock Crossing field, Wilbarger County, drilled into salt water then filled with oil after plugging back. Phillips Petroleum Company's Waggoner Estate 196 established the water level for the immediate area at 3095-97 feet after passing up oil saturation at 3061-64 feet and 3087-89 feet. Pipe was cemented at 3083 feet then gun-perforated with 147 shots at 3051-64 feet, resulting in hole full of oil.

Phillips Petroleum Company and Humble Oil & Refining Company have each completed four prolific oil producers from this new horizon for the South Vernon district.

W. W. Campbell & R. B. Campbell's Waggoner Estate 3-A, NEc H&TC Section 26, Block 4, about 2¾ miles southeast of the above deep zone wells, was awaiting pumping gauge late last week after repairing casing damaged by nitro shot in lower Canyon at 3654 feet. It is showing for a producer in a new horizon for the county, and passed up oil saturated zones in the upper Canyon to fulfill depth contract.

Two New Deep Sands for Beck

Two deeper horizons for the Beck field, Montague County, have been established through exploratory work on old producers. This area has heretofore produced from the 1500- and 1700-foot sandy-lime levels. O. V. Beck, Nocona discoverer, et al's C. L. Davenport 2, originally completed at 1704 feet, picked up sandy-lime pay at 1970-2051 feet, and logged schist at 2280-96 feet. Hole was plugged back to 2055 feet for a nitro shot, and the well pumped 102 barrels of oil and 231 barrels of water. Benton & Holmes' W. A. Reed 4-A, deepened from 1685 feet, encountered the fourth pay (broken) at 2320-28 feet, and pumped 90 barrels pipe line oil.

A protection string of 9⅝-inch pipe has been cemented at 3687 feet in The Texas Company et al's J. F. Marshall 1, projected Ordovician, or 6000-foot test, for the Delaware Bend structure, Cooke County. In southern Cooke County, Whitfield, Pearson & Grimes' C. F. Bundy 1, wildcat, is rated at 50 barrels daily, with a small amount of salt water from broken sand at 2112-35 feet and 2150-2156 feet.

TEXAS PANHANDLE
Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
CARSON COUNTY—		
Empire, Magnolia Pet. 3-E	907	3061
Magnolia, Fee 23, Tr. 244	399	3080
The Texas Co., Magnolia-Boney 7	514	3055
GRAY COUNTY—		
Danciger Oil & Refineries, Inc., E. G. Barrett 13	559	3299
E. G. Barrett 14	555	3301
Gulf, T. W. Catl'n 5-B	373	3129
W. C. Jones et al, A. J. Culler-Shell 6	999	3311
LeFors Pet. Co., B. Bull 4	966	2951
Magnolia, R. J. Sailor 7	824	3255
Shell, E. E. Gethings 3-A	191	2780
T. B. Haggard 6	761	3273
Stanolind, W. G. Kinzer 5	680	3310
HUTCHINSON COUNTY—		
Axla Oil Co., C. S. Terry 1	407	3042
Concho O&G Co., J. T. Hodges 2	543	3085
J. E. Crosbie, Inc., H. W. Pitts 17	656	3066
T. G. Nichols et al, J. W. Moore-Timms 2	593	3164
Phillips, Johnson-Green River 2	251	3053
Shell, B. Wisdom 3	756	3200
S. & M. Oil Co., J. W. Moore-Landon (Conoco) 6	437	3106
Stanolind, W. B. Haile 3-B	209	3062
The Texas Co., T. D. Lewis 13	545	3030
Texilvania Oil Co., Harvey 4	614	3053
MOORE COUNTY—		
Phillips, E. W. Nelson 1	¶38.6	3180

*Failures; †Junked; ¶Million cu. ft. gas.

NORTH TEXAS
Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
ARCHER COUNTY—		
C. E. Beavers et al, R. O. Prideaux 2	7	790
L. T. Burns et al, A. Pastusek 1-A, blk 14	*	1520
Butler & Latson, J. D. Carpenter 1, sec 39	20	1063
C. E. Grininger et al, Prideaux Bros. 1, sec 1835	*	1033
F. L. Pilkenton et al, E. N. Birdwell 2	*	637
Producers Dev. Co., W. F. Neimeyer 11, sec 2415	*	1623
Underwood Drlg. Co. & Campbell, R. Campbell 16-B, sec 1377	10	984
COOKE COUNTY—		
John Greathouse et al, Ed. Wilson 2	*	1965
A. D. Robinson et al, J. H. Otto 8-A, blk 5	53	1289
Schermerhorn Oil Co., M. Kessler 7	37	1280
JACK COUNTY—		
Algord Oil Co., S. M. Jones 1	508	3246
Cato Oil Co., J. A. Raley 7-B	267	3040
W. R. Dearing & Son, S. M. Jones 2	257	3232
S. B. Edwards et al, J. E. Henderson 1	*	3174
Alex McCutchin et al, R. R. Clayton 1	*	2996
Mar-Tex Oil Co., S. M. Jones 4	100	3153
S. M. Jones 7	360	3071
Oil Finance Corp., Sam Cullers 1	*	800
E. R. Stewart et al, B. B. Bryson 1	*	3105
MONTAGUE COUNTY—		
Sinclair Prairie, N. Keck 2	24	1746
N. Keck 3	*	1800
WICHITA COUNTY—		
L. T. Burns et al, Waggoner Bros. 22	*	1898
Deep Oil Dev. Co., Munger Bros. 10-A	2472	3862
P. H. Flynn et al, Honaker 3	*	1045
King Oil Co., S. B. Burnett 2-B, sec 3	54	882
Panhandle Ref. Co., L. F. Ramming 13-A, sec 1	66	1714
Perkins-Cullum Oil Co., S. B. Burnett 32, sec 5	*	1605
Pet. Producers Co., Allen-Kemp 74, blk 29	538	3867
WILBARGER COUNTY—		
Humble, W. T. Waggoner Est. 12-H, sec 46	1848	3048
W. T. Waggoner Est. 24-H, sec 46	2112	3069
King Oil Co., W. T. Waggoner Est. 3-P, sec 27	*	2157
W. T. Waggoner Est. 1-V, sec 107	*	2196
YOUNG COUNTY—		
S. S. Alexander et al, Mrs. L. D. Clark 3, sec 209	112	842
F. H. E. Oil Co., N. Finch 1-C, sec 39	*	700
Green & Glover, E. M. Rushing 1, sec 212	73	831
B. B. Mercer, Tr., N. L. Hardy 2, sec 260	*	650
Piper & Wilson, S. L. Scott 3, sec 334	14	1753
Pitzer-West & Tide Water Associated, R. J. LaPrade 2, sec 606	897	3907

*Failures; †Junked; ¶Million cu. ft. gas.

WEST TEXAS
Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
CRANE COUNTY (Sand Hills)—		
Humble, J. B. Tubb 12	2219	4435
ECTOR COUNTY (Foster)—		
Amon G. Carter et al, J. L. Johnson 3	487	4197
Stanolind, E. F. Cowden 4-B	1509	4170
ECTOR COUNTY (Goldsmith)—		
American Maracaibo Co., C. Scharbauer 3-A	585	4227
Atlantic Ref. Co., W. F. Cowden 6	827	4245
Empire, H. E. Cummins 3-C	390	4250
Gulf, C. A. Goldsmith 25	1416	4227
John E. Mabee & Blackstock, H. E. Cummins 2	1683	4265
Shasta Oil Co.-Cordova Union Oil Corp., Cummins 2	933	4263
T. P. Coal & Oil Co., C. Scharbauer 4	3220	4256
ECTOR COUNTY (Judkins)—		
Rushwold Oil Co., W. E. Connell 1	352	3636
GAINES COUNTY (Seminole)—		
Shell, M. J. Mann 1	508	5060
GAINES COUNTY (Wildcat)—		
Amon G. Carter-Continental, A. L. Wasson 1	¶6.6 & 332	4959
HOWARD COUNTY—		
Continental, S. T. Eason 8	1454	2428
Magnolia, Kelly-Roberts 2	*	3267
Moore Bros. Corp., M. Quinn 1	†	540
Plymouth Oil Co., TP Land Trust 13	1600	2520
JONES COUNTY—		
Brown Eagle Oil Co.-S. B. Roberts, W. S. Lewis 1	714	2001
Thos. D. Humphrey et al, Guitar 3	512	2007
Moutray Oil Co.-G. M. Nugent 1	*	2643
PECOS COUNTY (Wildcat)—		
Cardinal Oil Co., Tippett 1-N	20	1264
A. H. Flaherty & Son, J. C. Cunningham 1	*	2265
PECOS COUNTY (Yates)—		
Ohio Oil Co., I. G. Yates 38-A	48,600	1431
I. G. Yates 56-A	1224	1361
UPTON COUNTY (McCamey)—		
Cardinal Oil Co., Starnes-Fowler 1	710	2285
John W. Emch et al, E. F. Lyon 1	429	2243
Gulf, E. S. Hughes 5-B	208	2217
J. F. Lane 2-C	113	2207
J. H. Shirk 10	621	2295
Humble, R. P. Ricker 3-B	644	2666
Sun, A. S. Burleson 9	217	2159
UPTON COUNTY (Wildcats)—		
John W. Emch et al, University 1	*	3701
Hal C. Peck & J. H. Croft, R. H. Harris 1	*	1777
WARD COUNTY—		
Amerada, W. W. McDonald 5	727	2460
Empire, W. W. McDonald 23	539	2440
F.H.E. Oil Co.-Atlantic Ref. Co., Killough 7	271	2457
Gulf, Hutchings 80	820	2750
A. E. Lynch et al, Himmell 4-A	360	2620
Reno Oil Co., Hartage-Wilson 6	968	2458
Tide Water Associated, W. D. Johnson 27	1036	2696
WINKLER COUNTY (Eaves)—		
Gulf, W. P. Edwards 1-A	265	3175
WINKLER COUNTY (Halley)—		
Sun, S. M. Halley 7	516	2854
WINKLER COUNTY (Henderson)—		
Humble, J. B. Walton 14-C	3500	3050
WINKLER COUNTY (Kermit)—		
Harry Adams & Hitchcock, Walton 3-A	2365	3082
Bert Fields et al, O. Clapp-Pure 12	1707	3110
O. Clapp-Pure 13	1819	3100
Humble, N. P. Colby 5-B	271	3025
W. A. McCutcheon 9	510	3020
Magnolia, J. B. Walton 86	834	2940
J. B. Walton 88	877	2961
J. C. Maxwell, Inc., Gar-Tex O&G Co. 4-B	1353	3124
Skelly, T. C. Dougherty 3	605	3035
T. P. Coal & Oil Co.-E. M. Wahlenmaier, R. Clapp 4	806	3100
R. C. Thornberry 1	1295	3065

*Failures; †Junked; ¶Million cu. ft. gas.

EAST TEXAS

Talco Trinity project fixes water level and plugs back.

* * *

Increased drilling in evidence in East Texas field.

Talco, Texas.—The prospective lower Trinity producer for the extreme east end of Talco field, Magnolia Petroleum Company's J. A. Chapman 2, established the water level about 60 feet below the first oil saturation in the second Glen Rose lime and sand series, and has plugged back for a production test.

This first deep test for the faulted structure was reported last week as showing oil saturation in cores recovered below 5588 feet. Formation tester used at 5583-5608 feet, with an elevation of 329 feet, showed 50 feet of oil and drilling fluid in 25 minutes. The hole was deepened, logging lime and sandy-lime at intervals, with three feet of oil saturated sandy-lime immediately above first water sand at 5643 feet, or 5314 feet sub. Water sand was followed by red beds at 5653-73 feet, and red sand at 5673-77 feet. Steel line measurement at the latter point placed the correct depth at 5661 feet and the hole was plugged back to 5620 feet before cementing 7-inch pipe at 5580 feet.

Will Test This Week

Production test through casing is due early this week. Successful completion of an oil producer will have considerable bearing on future developments in the field, if the new horizon yields an attractive grade of crude, as the Paluxy zone at 4150-4350 feet produces 15 to 23 degree gravity oil, with a majority of wells making salt water. Magnolia Petroleum Company's bid for a deep producer, located near the most westerly northwest corner of 341¾-acre lease, failed to produce in the Paluxy, although 660 feet southwest of a pumper. Top of the first Glen Rose was logged between 5028 and 5058 feet, and first anhydrite at 5350 feet. Talco operators that have set 7-inch pipe on top of the Paluxy can deepen to the lower zone, but the majority of the completions have used 5½-inch casing, and an extra string will be necessary to exclude water from the Paluxy.

Periodical bottom hole pressure readings made early in June in the Sulphur Bluff field, Hopkins County, by railroad commission engineers recorded an average pressure of 1860.31 pounds, corrected to 4000 feet sub sea. The survey was made at 26 wells, and pressures ranged from 1766 pounds to 2024 pounds. The high reading was on F. D. Jones et al's Pierce-Gulf 8. Wells producing salt water in the west portion of the field recorded higher pressures than the average.

Elimination of Humble Oil & Refining Company's L. K. Riggs 1-A, lower Trinity test for the northeast edge of the Van field, as a potential producer took place last week when salt water sand was found at 5559 feet, with an elevation of 463 feet. The second fault plane was cut at 4550 feet, and top of massive anhydrite was logged at 5100 feet. Drilling was underway at 5620 feet, indicating that the company plans to explore the entire section of lower Glen Rose.

Mexia and Cayuga bids for Trinity oil disappointing

Mexia, Texas. — Renewed bid for Trinity production in Mexia field, first Woodbine oil strike in East Texas, and a prospective deep oil producer for the west flank of Cayuga field, Anderson County, made disappointing showings the past week.

Pure Oil Company's Kendrick 16, offsetting production and about 1700 feet east of the Woodbine fault made drill stem test in lower Glen Rose at 5552-5646 feet, and developed a small show of gas with 1300 feet of drilling fluid in 1 1/3 hours. It will be deepened. Top of Georgetown lime was logged at 3365 feet, or 2845 feet sub sea. Paluxy sand section and also a solid body of anhydrite is not found in this area, although the former is evidenced by black shale. First porosity, with oil stain, was logged at 5140-55 feet.

Roeser & Pendleton, Incorporated's, Bowyer 3, flank test in the Trinity for the Cayuga field, has failed to respond to repeated circulation with oil and also input gas at 7682 feet. A small amount of oil from the lower Glen Rose has been developed from this test, but no gas or water is present in the formation. Seven-inch pipe was cemented at 7589 feet, with an elevation of 317 feet.

Barnett Petroleum Corporation's Sanford 1, Trinity project for the Mount Enterprise faulted structure in eastern Rusk County, was drilling at 5270 feet. Top of anhydrite was logged at 5168 feet, with an elevation of 361 feet. Tide Water Associated Oil Company et al's McElreath-Suggett 2-C, second test for the Opelika area, Henderson County, was drilling at 5500 feet.

Increase in completions forecast for East Texas

Kilgore, Texas.—A steady gain in drilling operations on inside locations in East Texas field in recent weeks forecasts the probable completion of a greater number of flowing and pumping wells this year. The field recorded a net gain of 1035 producers during the first six months of this year as com-

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pared to 1348 for the same period last year, and a net gain of 2457 wells during 1936. Plugging of depleted wells cut the totals slightly. During 1936 drilling tapered off during the last six months, and continued on a reduced basis until late spring when higher crude prices and a generous policy on well permits paved the way for expanded operations.

Current report on field operations reveals 192 operations, including 92 active tests; 25 idle tests; 55 derricks and rigs; and 23 locations. Survey shows that independents, credited with 48,780 productive acres drilled on an average of one well to 4.7 acres, are responsible for 55 of the active tests. Majors have 39 rigs in operation, with an aggregate of 84,220 productive acres, bearing 12,734 wells, or an average of one well to 6.6 acres. Average density for the field is one well to 5.7 acres.

Granting of well spacing exceptions has made it possible for many leases, bearing more than one well, to be drilled to an average density of one well for each acre. Each week the completion list records instances of close spacing.

Completion report for the past week accounts for 42 flowing and pumping wells, including 29 wells on leases owned by independents. Eighteen completions penetrated the Woodbine sand zone 5 feet, or less, as a precaution against bottom hole water, and 11 were credited with penetrating one-foot, or a fraction, of the sand.

Asks 20-acre spacing rule for Alta Mesa

Austin.—A 20-acre spacing rule and allowable, based 50 percent on potential and 50 percent on acreage, were included in suggested rules for Alta Mesa field, submitted to the Texas Railroad Commission by Standard Oil Company of Texas last week.

The rules were designed for the Garcia sand, which lies between the 2400 and 2600 foot zone, but, according to Supervisor Laten Stanberry, the commission rules when issued must also cover the 3000 and 3500 foot sands in the fields. Stanberry questioned the wisdom of a 20-acre rule on the theory that with the low gas pressures in the field one well would not drain that large an area. The gas-oil ratio was said to be 100 to 1.

Standard Oil Company of Texas asked for rules requiring that surface casing be set in the first shale break below the 300-foot level, with the second string at 1200 to insure shutting off of the 1100-foot gas. Witnesses said there are eight producing wells in the area, two flowing naturally and the remainder by the use of a gas lift produced from the 1100-foot sand. Maximum thickness of the sand is 32 feet, and ultimate recovery was estimated at 4000 barrels to the acre.

Texas grants 457 drilling permits

Austin.—The Texas Railroad Commission approved last week permits for drilling 457 new wells in Texas, 172 more than were allowed the week before.

In the East Texas field there were 120 new locations, there being 63 in Gregg County, 37 in Rusk County, 13 in Upshur County, and 7 in Smith County. East Central District reported 34 scattered locations.

West Texas reported 59 permits, with 20 in Winkler County and 17 in Ector County. The Panhandle area reported only one new permit.

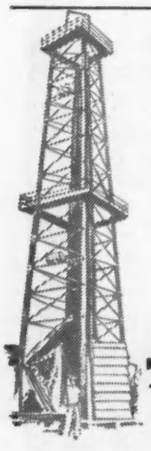
There were 51 locations from North Texas, including 13 in Young County and 11 in Jack County. West Central Texas listed 27 locations, 19 being in Jones County.

There were 113 permits for wells in the Gulf Coast district, including 23 in Jefferson County, 18 in Nueces County, 16 in Brazoria County, and 15 in Aransas County. Southwest Texas reported 52 permits, of which 25 were in Duval County and 12 in Caldwell County.

EAST TEXAS
Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
JOINER AREA—		
Arcadia Ref. Co., J. R. Green 15-A (55.56-ac)	4000	3750
Blacwell O&G Co., W. P. Moore 10 (17.81-ac)	7200	3627
British-American O. P. Co., Mayfield Co. 8 (38-ac)	3500	3621
Champlin & Bass, Inc., R. G. Mason 7 (40.45-ac)	5600	3639
R. W. Fair & Thompson, W. E. Wiley 6-A (26.87-ac)	360	3639
W. H. Gant-Garvin-Wegener, W. P. Moore 38 (134.24-ac)	850	3571
Magnolia, Irion Wright 22 (81.9-ac)	8700	3670
C. L. McMahon et al, Joe Lee 9 (83-ac)	235	3653
Roosth & Genecov, J. C. Bateman 1-A (15-ac)	1200	3772
Sonbar Corp., A. P. Finney 14 (62-ac)	5000	3710
Stanolind, J. B. Milstead 15 (90¼-ac)	5400	3735
Tide Water Associated, O. Whittington 7 (39¼-ac)	20	3639
G. H. Vaughn et al, E. W. Reagan 9 (28.03-ac)	7200	3711
Clint Wood Drlg. Co., J. B. Irwin-Gulf 8 (32.4-ac)	3000	3796
KILGORE AREA—		
Adams & Lyles, Inc., L. Howard 12 (47.8-ac)	9800	3609
Hugo Allen et al, Ben Bean-Nolan 2 (3.13-ac)	6000	3616
Barnsdall, T. H. Gill-Shell 8 (83-ac)	3600	3645
D. F. Cameron-W. D. Tucker, T. H. Gill 1 (1.7-ac)	3600	3617
Empire, C. O. Christian 14 (103-ac)	8000	3773
Grace Oil Co., M. B. Hughey 3 (1¾-ac)	480	3520
Gulf, R. N. Brightwell 9 (50-ac)	9200	3627
L. & G. Oil Co., A. A. King-Conoco 2 (87¼-ac)	1000	3752
J. H. Merritt et al, C. C. Crews 1 (20-ac)	1200	3652
Roy Reynolds et al, J. S. Elder 6 (20-ac)	240	3577
Max Rubin & Nadel, D. Wills 10 (86-ac)	1200	3630
Shell, J. B. Watson 69 (385.2-ac)	10,400	3587
Sun-Seaboard, J. N. Campbell 17 (106.9-ac)	10,000	3527
Tide Water Associated, J. R. Beall 12 (80.68-ac)	5500	3670
H. J. Wilder et al, S. Box 5 (20-ac)	4200	3700
LONGVIEW AREA—		
Arkansas F. O. Co., L. Y. Tuttle 11 (61.51-ac)	9400	3604
Atlantic Ref. Co., A. Tooke 7-A (40-ac)	11,000	3710
Barnsdall, J. G. McGrede 19 (109-ac)	10,000	3631
Barnett Pet. Corp., O. J. Phillips 4 (60-ac)	600	3741
O. J. Phillips 7 (60-ac)	600	3699
Bristow-Winn & Bailey, W. A. Moore 8 (28-ac)	9200	3557
Humble, W. D. Mackey 28 (198½-ac)	900	3577
L. G. & S. Oil Corp., W. D. McQueen 15 (94.54-ac)	320	3584
P. H. Pewitt et al, J. H. Sobey 4-A (23-ac)	2500	3727
B. H. Rogers et al, J. Evers 6 (44.11-ac)	240	3888
Sun-Seaboard, J. Rollins 17 (87-ac)	10,500	3640
F. R. Swain et al, Ann Kavanaugh 1 (1-ac)	3000	3596
Tide Water Associated, C. C. Clemmons 6-A (28.74-ac)	7000	3632
ANDERSON COUNTY (Cayuga)—		
Tide Water Associated-Seaboard Oil Corp., J. F. Duncan 2 (78.81-ac)	75	4074
CASS COUNTY (Rodessa)—		
Gulf, T. W. Henry 1, Hugh Owen sur	170	5940
Magnolia, L. A. Haywood 20, Priscilla Evans sur	540	6049
R. W. Norton, Davis 5, H. Holbert sur	335	5995
Texas Co., Rambo 4, Cass County School Land sur	460	6068
HENDERSON COUNTY (Cayuga)—		
Clark-Cowden Drlg. Corp., C. D. Wright 5 (99.33-ac)	3500	4089
Roeser-Pendleton, Inc., B. H. Wathen 5 (93-ac)	3500	4103
HOPKINS COUNTY (Sulphur Bluff)—		
W. L. Goldston-Normandie Oil Corp., Smith 17 (450-ac)	960	4520
TITUS COUNTY (Talco)—		
G. M. W. Oil Co., Talco Townsite 6-A, lot 2, blk 32	240	4320
Magnolia, K. Mainard 9 (130¾-ac)	172	4303
Merritt Drlg. Co.-Trentman, J. B. Bond 1, lot 2, blk 42	144	4320
VAN ZANDT COUNTY (Van) —		
Pure Oil, C. H. Cannon 7 (33-ac)	60	2968
BOWIE COUNTY—		
Sutton & Hawkins, N. M. McDuffie-Harris 1 (389.45-ac)	*	6010
HOPKINS COUNTY—		
Housh & Thompson, Inc. et al, A. B. Spencer 1 (92.9-ac)	*	4781
RUSK COUNTY—		
John W. Merritt et al, J. M. Tipps 1 (250-ac)	*	3888

*Failures; †Junked; ¶Million cu. ft. gas.



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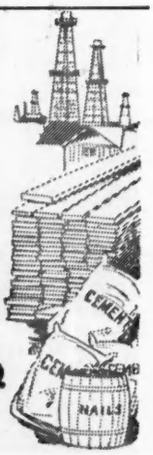

SOUTH TEXAS

Another Jackson sand horizon opened in North Sweden.

* * *

Corpus Christi area deep tests are disappointing.

San Diego.—Another new Jackson sand producing horizon has been uncovered in the North Sweden field, Duval County, which is expected to rival the discovery sand in importance. Standard Oil Company of Kansas's Atlee Parr 1, nearly one mile south of the field, cored hard and soft sand streaks from 4721-44 feet and lignite to 4747 feet. A drill-stem test of 10 minutes duration resulted in 650 feet of pipe line oil and 85 pounds pressure through ⅜-inch chokes, top and bottom. Casing was set and preparations were being made to drill out plugs.

The above well, located in the San Andres Grant is on an 80-acre lease acquired from Hiawatha Oil & Gas Company. It is lower than the top of the field, structurally, which possibly accounts for the development of this sand section. This horizon, found 50 feet above the regular pay, is made up of thin sand stringers carrying gas when drilled in the main field.

The other key well of the field is Navarro Oil Company's E. M. Rossi 1, one mile west of the field and in the southeastern portion of Section 11. The well, running 75 feet higher than the main field to the east, encountered three feet of very tight hard sand with slight oil and gas odor at 4720-23 feet and late in the week was near 5400 feet, expecting to pick up the Cockfield sand within the near future. This well encountered the Jackson at 3944 feet and the Hockleyensis at 4317 feet. It is 400 feet higher structurally than the main Sweden field, several miles to the south, which is producing at 5950 feet.

Probably Important

This field is looked upon as being a possible major producing area. With approximately 50 feet of closure already proved within the actual oil zone and a producing area of fully 500 acres established, the field is now in the 10,000,000-barrel classification. There have been several sand samples of the regular sand which show a porosity of 26 percent and a saturation of 10 percent and a gravity of 46.7 degrees, corrected. Calculating at a minimum of 800 barrels per acre-foot and an over-all average of 25 feet, this would give a recovery of 20,000 barrels to the acre. Russ Petroleum Corporation's north outpost well in the field cored 27 feet of sand.

Russ Petroleum Corporation et al's A. Farias 2, north end of the field, flowed 158 barrels of oil and 2 barrels of salt water per day through 5/32-inch choke with 425 pounds working pressure on the tubing and 750 pounds on the casing. The sand section was from 4803-30 feet and sandy streaks in shale to 4830-47 feet and mostly shale to the total depth of 4865 feet. Casing was set through the section and perforated at 4803-11 feet with 10 shots. A slight bit of salt water was obtained on the drill-stem test at 4801-47 feet and a slight odor was obtained in the cores below 4811 feet. Parr Oil Corporation's F. Vaello Puig 6, three locations to the east, logged the sand 10 feet lower at 4803-8 feet and was completed for four barrels of pipe line oil per hour through ⅛-inch choke. It now appears the water may be from the sand stringers below the regular pay or from a leak above the sand. In any event, the water level cannot be definitely established at this time and it is possible that oil wells will be completed even lower structurally.

About 1½ miles southwest of the nearest production in the North Sweden area and 2/3-mile north of the original Sweden field, Hiawatha Oil & Gas Company's Southland Life Insurance Company 3, Section 15, was below 4125 feet. It is attempting to connect the two areas.

Extension Attempt Fails

King Drilling Company's attempt to extend the Sweden field about two miles to the east apparently failed when a drill stem test of broken sand in the Cockfield developed only 65 feet of oily mud in 10 minutes through ⅝- and ⅜-inch chokes at 5933-50 feet. It was going ahead below 6000 feet. On the east side of the field, Hiawatha Oil & Gas Company was still working on George Herberger 2, possibly in the same zone that is productive in the North Sweden field. This test drilled to 5914 feet, plugged back and perforated at 5080-84 feet, where it is flowing about 15 barrels of oil per day. It is to be put on pump.

New Duval Shallow Area

The shallow area of Duval County was receiving a new oil-producing area in the upper phase of the Jackson, commonly referred to as the Cole series. Government Wells Oil Company's H. A. Lundell et al 2, 1650 feet out of the northeast corner of Section 140, drilled

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plugs after setting casing on sand at 1518-28 feet. Drill-stem test was made through 2-inch top and ⅜-inch bottom choke and 1050 feet of oil with 150 pounds pressure was recovered in 11 minutes. About 1200 feet to the northwest, Lundell 1 recently was completed as a gasser at 1513-20 feet to open the Lundell field, 1½ miles west of Government Wells production.

Thomas Estate and Lockhart Brothers' Lillian Parr et al 3-A, third test in the Thomas-Lockhart field, was abandoned at 4810 feet after showing only gas in the sand encountered at 4654-80 feet. A new test has been started by Lockhart Brothers ½-mile southwest of the field, being Atlee Parr 1 in Section 277.

South Coast deep operations bring disappointments

Corpus Christi. — Disappointing results were obtained in several deep tests along the South Texas Gulf Coast in attempts to widen prolific producing areas. J. K. Culton's I. M. Singer 1, Lot 13, Block 39, two miles southwest of the Flour Bluff field in Nueces County, cored broken sand, shale and sandy shale streaks from 6620-70 feet and ran a drill-stem test at 6624-70 feet in which 3600 feet of salt water was recovered in 14 minutes. This test ran fully 100 feet lower than the oil wells in the main Flour Bluff field.

Mills Bennett's William Heuermann 1, Section 408, one mile west of the Saxet field, cored what is believed to be the regular 6200-foot sand about 80 feet low at 6308-16 feet, showed gas and gasoline odor, but developed five stands of salt water and no pressure in five minutes and the well was coring ahead to the 6700- and 6900-foot levels.

The main Saxet field, however, was expanded in the 4000-foot sand by Donico Production Company's V. M. Donigan 7, which is completing in sand at 4074-88 feet. A drill-stem test at 4065-88 feet developed 350 feet of pipe line oil and 165 pounds pressure in five minutes and the hole was drilled to 4305 feet, completing via the perforation method. This sand is productive in the Clarkwood townsite, 2½ miles to the southwest. Several other wells in the immediate vicinity have shown for production in this level.

I. J. Allen and Seaboard Oil Corporation's J. O. Chapman 6, Section 38, in the Chapman Ranch area, Nueces County, was drilling at 6540 feet after showing oil and some water on drill-stem test at 6452-58 feet.

Several failures below 7000 feet were recorded in Nueces wildcat areas. Taylor Refining Company's J. V. Styles 1, four miles southwest of the Luby pool, was stopped at 7022 feet, while Southern Minerals Corporation's Richard King 1, 1½ miles northeast Bentonville-King field, has been abandoned at 7564 feet, probably in Jackson. Rig is to be moved immediately to H. G. Yakey 1, Section 38, just east of Agua Dulce, for a deep test. Also in the Agua Dulce area, United Production Corporation's T. S. Schroeder 1 is waiting on rig; M. L. Rivers 3-A is drilling near 4900 feet; Harvey 1, which drilled to 9002 feet, is testing through perforations at 7383-88 feet. L. M. Lockhart's Ollie Purl 1, in the same area, is drilling near the 7300-foot sand encountered in the United well and which showed for a producer at that level. Conroe Drilling Company's Hagen & Stewart 1, in the southern portion of the field, was drilling below surface pipe. It is a projected deep test.

To Test High Point

Sam E. Wilson has made one of the most important locations in some time along the South Texas Gulf Coast. It is J. F. Herold 1 in the south corner of Lot 2, Section 6, Bohemian Colony Subdivision, Enrique Villareal Grant, four miles south and slightly west of Corpus Christi. This is a surface high, being the highest point along this section of the Gulf Coast. Geophysical and geological studies have indicated a very interesting structure. Lease trading has been unusually active and very fancy prices have been paid for both leases and royalty. The test is projected to 7000 feet, which will carry it into the Frio.

United Production Corporation is still testing J. J. O'Brien 12, deep test on the east side of the Refugio field, Refugio County. The well, bottomed at 9225 feet, plugged back and perforated above 7911 feet. To the northeast some 2500 feet, Edwin M. Jones' Shelton 1 is drilling near 6400 feet. In the southwestern portion of the same field, where 4900-foot sand has been in process of development, a new sand has been established by Houston Oil Company's F. B. Rooke 32. The test drilled to 6420 feet, sidetracked and recored the sand at 6192-6202 feet, where the test flowed 96 barrels of 38.1 gravity oil per day through ⅛-inch choke under a working pressure of 650 pounds and casing pressure of 1950 pounds.

Jim Wells County's interest centers around Magnolia Petroleum Company's A. A. Seeligson 7, several miles east of the Premont field. It is drilling below 5850 feet after showing gas and distillate sand at 5596-5624 feet, where it developed 900 pounds pressure in 10 minutes. The volume, however, was not sufficiently great to indicate a commercial well and the test is being carried ahead on its 9200-foot project.

Barnsdall Oil Company's Kate Edwards 1-A on the Lamar prospect, in Aransas County, was below 9000 feet to be the deepest well in that area. To the west, a heavy development campaign is under way to the 7100-foot sand in the McCampbell field of Aransas and San Patricio counties. In addition, several key wildcats are active along the trend.

George J. Greer and American Liberty Oil Company's J. R. Davis (Ward properties) 1 on the Red Fish Lake prospect, showed a little oil at 5254-84 feet and was drilling ahead. Cockburn Oil Company and Temple Hargrove's Santa Theresa Farms 1, near La Ward, also in Jackson County, ran unusually low in comparison with several other tests in the area and has been abandoned at 6506 feet.

Ezell hearing postponed

Austin.—The Texas Railroad Commission has postponed until July 12 a proposed hearing on rules for Ezell field, which was set for June 30. The pool is in McMullen County. Temporary rules have been put into effect in the area.

Frio County wildcat has slight oil show

San Antonio.—H. A. Pagenkopf and L. C. Jamieson's Blackaller Estate 1, northwestern Frio County, wildcat, encountered gas with a slight showing of oil at 1999-2006 feet and sand with shale streaks to 2018 feet carrying fair oil show and was drilling at 2120 feet. This showing is in the Navarro series and corresponds to the 3900-foot sand in the Pearsall field 20 miles to the southeast.

This well, located in the James Gourley Survey No. 765, 10 miles north of Frio Townsite is 800 feet north of Lafevre et al's Blackaller 1, drilled several years ago. The latter had showings in the Navarro sand and in the Austin chalk and Buda limestone. While the new test is primarily projected to the Edwards limestone, it will test shows above.

Amerada Petroleum Corporation's effort to establish Edwards limestone production 2½ miles southwest of the Pearsall field failed when Harrigan swabbed salt water with a show of oil and gas in the Edwards, topped at 6409 feet. The hole is being plugged back for completion in the upper levels. It is expected to extend the chalk production. Halff & Oppenheimer 8, bottomed at 10,341 feet, is still trying to recover drill pipe.

Wilcox Oil & Gas Company's Light Ranch 1 first of a four well contract in the southeastern portion of Dimmitt County, is drilling below 7650 feet on an Austin chalk project.

Considerable interest centers around the Batesville Edwards limestone field in northeastern portion of Zavalla County. Applications have been filed for nearly a dozen permits for wells to be drilled in the immediate vicinity of the field. This move, however, is not looked upon as indicating an immediate drilling campaign, as the majority of the intentions are a number of wells on a single lease, indicating that only one will be drilled at this time.

Caldwell County apparently has a new producing spot in the making in the Austin chalk. Stapper Petroleum Corporation's E. Martin 1, A. Floyd survey, 1½ miles northwest of Luling has been completed at 2557 feet, where it is pumping 54 barrels of 36.5 gravity oil per day. Chalk was topped at 2427 feet and 130 feet of saturation drilled. This well is 1800 feet northeast of McDonald et al test on the Brinkley tract, which ran 80 feet lower structurally and pumped several barrels per day from a thin section of chalk.

Killam Hearing Scheduled

Austin.—The railroad commission July 2 called a hearing on field rules for the Killam field in Webb County for July 14.

Production tax record

Austin.—The oil industry paid $1,416,142 to the state during June as the gross production tax on May production, according to Comptroller George H. Sheppard. The amount was the largest ever collected. It represented payments on a production of 43,999,386 barrels, likewise the largest production.

SOUTH TEXAS

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
SAN ANTONIO DISTRICT		
BURLESON COUNTY—		
J. H. Liles et al, G. Scott 1, 3½ mi ne of Somerville 115-ac tr in Jacob Long sur No. 22, Ab 37..	*	4010
CALDWELL COUNTY—		
Baker-Freeman Oil Co., C. B. Corder 1, John A. Neill sur (Branyon)	30	2115
E. R. Graser et al, J. T. Fields 1, Miles C. Dikes sur (Luling)	40	1965
Lanning & Coffield, C. B. Corder 3, John A. Neill sur (Branyon) ...	30	2015
Lincoln Pet. Co., T. Harry Brown 5, D. Cooper sur (Branyon)	120	2137
T. Harry Brown 6, Dillard Cooper sur (Branyon)	160	2133
Magnolia, W. J. Tiller 15, John Henry sur (Luling)	538	2093
Stapper Pet. Co., E. Martin 1, 150 ft sl, 330 ft wl of 37-ac tr in A. Floyd sur, 1 mi nw of Luling....	54	2557
Texas Gulf Prod. Co., Madlin 1, C. M. Cannon sur (Buchanan)	120	2194
W. M. Vaughey et al, M. O. Flowers et al 5, Dillard Cooper sur (Branyon)	95	2162
R. S. Wyrick et al, S. F. Magee et al 3, J. A. Neill sur (Branyon)..	576	2279
GUADALUPE COUNTY—		
R. E. Wilkinson, Robt. Inman 1, Green Dewitt sur (S. Darst Creek)	75	2558
CORPUS CHRISTI DISTRICT		
ARANSAS COUNTY—		
Buckingham Oil Co., McCampbell Ranch 8-A, lot 4, blk 42 (McCampbell)	825	7120
BEE COUNTY—		
J. R. Dougherty, R. T. Hicks 2, 150 ft sl and 150 ft w of nw cor of sub 4 of S. G. Davidson 278-ac tr but in blk 47 of Hicks Est., Holman George sur, Jose Maria Uranga gr, 1½ mi nw of Normanna field and 1¼ mi s and a little e of Straunch field.....	*	5009
BROOKS COUNTY—		
Standard Oil Co. of Texas, Braulia Garcia 4, R. G. Salinas sur (Alta Mesa)	¶10	2590
HIDALGO COUNTY—		
Dean Bros. et al, Lula George 1-C, sh 13, por 41 of Reynosa (Samfordyce)	*	3146
Ralph E. Fair, Inc., Daniel Flores 3, sh 250, por 38 J. of Reynosa (Samfordyce)	800	3202
JACKSON—		
Cockburn Oil and T. Hargrove, Santa Theresa Farms 1, center of Tr. 34, sec 23, I&GN sur, blk 1, ab152	*	6506
JIM WELLS COUNTY—		
Diamond Half Oil Co. (Trio Oil Co.), C. M. Laughlin 1, lots 33 and 48, sec 77, Haldeman subd (Premont)	*	2335
Wellington Oil Co., Clara Driscoll Sevier 1, 5887 ft 5525 ft of La Anima Sola gr, ab 545 (115.43-ac tr)	*	6262
LIVE OAK COUNTY—		
Loma Oil Co., L. Jacob Corp. 8-B, 1050 ft nwl, 750 ft swl of sec 13, GH&H sur (North Jacob).....	*	1090
Ohio Fuel Supply Co., H. J. Rosebrock 2-A, Louis Romaro sur (Oakville) . .....¶3 &	25	2794
NUECES COUNTY—		
Baltic Drilling Co., Frank Harmon 5, sur 416, (Saxet)	475	6733
Lonnie Glasscock, Glover Johns 2-B, W. M. McGregor sur (Saxet)...	475	4866
Hiawatha Oil & Gas Co., Mrs. Nellie Griffith 7, sur 416 (Saxet).....	375	7230
H. H. Howell et al, Plachy 2, John Smith sur No. 25 (Saxet)	320	4225
Humble & Barnsdall, Mary C. Collier et al 1, lot 29, blk 48 (Flour Bluff)	625	6670
Phillips Petroleum Co., Fred Frank 1, C. E. I. P. & M. sur (Saxet) perf 5775-78 .....¶3 &	50	7016
Hiriam M. Reed et al, Catherine Quinn 3, 29-ac lse Villareal gr (Saxet Heights) perf 4068-85....	525	4126
Richardson Pet. Corp., F. Quiroz 11, sur 311 (Saxet), perf 5825-30	650	5860
Southern Minerals Corp., Richard King 1, 2174 ft n of sl, 466 ft e of wl sec 32, King Farm Lots....	*	7564
Taylor Pet. Co., J. V. Styles 1, 330 ft s and wl of blk 14 (40-ac tr) Rowsey subd in sec 18, I. Z. Bishop subd of Petronilla gr....	*	7022
Texon Drilling Co., Carter-Ocker-Till 7, J. Ward sur No. 316 (Saxet)	425	4449
REFUGIO COUNTY—		
Houston Oil Co., F. B. Rooke 32, Thos. Mullin sur (Refugio)	325	6420
United Prod. Corp., M. F. Lambert 53, Swisher sur (Tomoconnor)...	975	5915
M. F. Lambert 57, J. Swisher sur (Greta)	875	5915
SAN PATRICIO COUNTY—		
Humble, J. W. Mayo 24, J. H. W. Ottman sur (Taft)	725	4365
VICTORIA COUNTY—		
Barnsdall & American Liberty, J. M. Pickering et al 10, Wm. Rupley sur (Placedo)	¶20	6785
Gulf, Claude A. Keeran 11, M. De Leon sur (Keeran)	*	6361
Haynes B. Owenby, T. P. Traylor 7, SA&MG sur (Placedo)	425	4774
LAREDO DISTRICT		
DUVAL COUNTY—		
Argo Oil Company, Juan Carrillo 1, sec 9, Sweden sub. Santon Flores gr (N. Sweden)	650	4760
Arkansas Fuel Oil Co., Mabel Rossi 1, sec 10 Sweden subd Sansos Flores gr (North Sweden)	950	4758
Conservative Oil Co., 5, DCRC-Sentz sur 52 (Colmena)	¶15	1455
Continental, Clara Driscoll Sevier 17-A, sec 448 (Driscoll)	375	3436
Cox & Hamon, Yoakum-Green 5-A, BS&F sur (Hoffman)	75	2717
N. V. Duncan, Worden-Drought 9, sur 151 (Charamousca)	65	1520
Hamill & Smith, C. W. Hahl 15-C, sec 63 (Loma Novia)	*	2579
Humble, Roos Bros. 4, sec 119, B. S. & F. sur (Labbe)	¶15	2850
Magnolia, DCRC 11, sur 95 (Piedre Lumbre)	60	1961
Reliance Oil & Royalty Co., D. Ruiz Est. 3, sec 125 (Hoffman)	*	2877
Reynosa Oil Co., P. R. McLean 1-C, sur 62 (Loma Novia)	460	2825
Russ Pet. Corp. et al, A. Faris 2, Santos Flores gr, sur 9 (North Sweden)	420	4865
Sarnosa Oil Corp., E. Weil Est. 16, M. Rogers sur No. 130 (Sarnosa)	106	2421
Shell, Bishop Cattle Co. 11, sur 59 (Loma Novia)	290	2575
Southwest Production Corp., J. Luptak 5, sur 41 (Government Wells)	120	2415
The Texas Co., DCRC 4-B, sec 583 (Colmena)	¶3	1577
Thomas Est. & Lockhart Bros. Lillian (Atlee) Parr 3-A, E. H. Valentine sur (Thomas-Lockhart) ..	*	4810
JIM HOGG COUNTY—		
Magnolia, Merchants Bank 43, 330 ft sl and wl of ne¼ of sec 151, CB&NG RR sur	*	2226
McMULLEN COUNTY—		
National Pet. Co., Chas. T. Lark 4-C, E. W. B. Scrugham sur (Jacob)	35	968
STARR COUNTY—		
John H. Clopton et al, Dionicio Tijerina 4, 230 ft sl, 850 ft wl of blk 12, share 14-C, por 80, J. of Camargo (Rio Grande City).....	*	1630
Moss & Heard, S. B. Ricaby 4, 26,250 ft n of State Hwy No. 4 and 200 ft el of w½ por 83 (Ricaby)	*	1820
Sun, G. P. Wardner 1, por 84, (South Ricaby)	144	1780
WEBB COUNTY—		
Humble, Amado S. Laurell et al 2, SM&S sur (Killam)	185	2027
O. W. Killam, D. G. Garcia 3, sec 786 Owens sur (Killam)	75	2048
Magnolia, Brennen-Benavides 44, blk 13, Myrtle E. Hale subd Mariano Arispe gr (Cole-Bruni) ¶2 &	85	3427
J. R. B. Moore, M. D. Slator 1, 330 ft nwl, 990 ft nel blk 74, Slator Ranch subd, Borrego gr.....	*	1502
Sun, Brennen-Benavides 1-A, blk 10, M. E. Hale subd, M. Arispe gr (Cole-Bruni)	*	3476
ZAPATA COUNTY—		
Nordan & Morris, C. Bustamante 26, sh 33, Fansler Partition, Comitas gr (Escobas)	*	1207

*Failures; †Junked; ¶Million cu. ft. gas.

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Humble apparently has new field at Friendswood.

* * *

First Frio production obtained at West Columbia.

* * *

Second Joe's Lake well makes 495 barrels.

Houston.—Indications of a new field in Harris County, development of several new fields, and wildcat locations held the spotlight in oil development in the Texas Gulf Coast last week.

Humble Oil & Refining Company evidently has discovered a new field in the Friendswood area, Harris County, in B. J. Settegast 1, Perry & Austin Survey. The test was coring sand showing oil at 5990 at the end of the week after logging top of the oil sand at 5811 feet. Only a few shale breaks have been encountered in the thick section showing oil. From all indications the well may open a new field the size of Hastings. It has been predicted by several leading geologists that the well should core between 200 and 250 feet of oil sand. Settegast 1 will be cored until the water level is encountered.

$400 to $500 Per Acre Base

The Friendswood prospect is northeast of Hastings, Brazoria County, which has an average sand thickness of over 800 feet and is more comparable to Conroe, the largest field in the Texas Gulf Coast, than any other field in the district. Since the Humble Oil & Refining Company logged top of the oil sand at 5811 feet an exciting lease play has developed. Prices are now ranging from $400 to $500 per acre base for royalty. Royalty continues to be purchased at Hastings field for $5000 per acre base.

Several interpretations of the Friendswood wildcat are to the effect that it is on the Geno prospect and that it will be large in size. Development in this district has been going on for the past 15 or 20 years. However, some are of the opinion that it may be on the same structure with Hastings with a large graben between the two fields.

This new strike indicates that it may be the most important since Hastings and Anahuac. Humble Oil & Refining Company has considerable acreage in all three districts, and the discovery at Friendswood greatly increases the company's crude oil reserves.

Two Locations for Chocolate Bayou

Chocolate Bayou prospect, Brazoria County, received locations for two wildcats last week. Texas Gulf Producing Company's W. D. Adams 1, is 330 feet west of the east line and 660 feet north of the south line of the most southerly southeast corner of the H. & T. B. Survey, Section 40. Ohio Oil Company's H. Kemper 1, is 330 feet each way out of the northwest corner of Lot 1, Kemper subdivision, or approximately 1700 feet from the west line and 330 feet from the north line of the H. & T. B. Survey, Section 33, abstract 251, Brazoria County.

Ohio Oil Company's location is about a mile south of Texas Gulf Producing Company's Adams 1. North of Texas Gulf Producing Company's wildcat location. Jack Clark's Spear 1 was drilled to 5162 feet and was dry. Several sands showing oil and gas were encountered, the best around 4251 to 4254 feet.

Humble Oil & Refining Company also announced location for a wildcat test on a geophysical block east of the town of East Columia in the S. Carter Survey, Brazoria County. W. B. Munson Estate 1 is 3000 feet from the east line and 3000 feet from the south line of Survey. Some refer to this area as Bailey's Prairie.

New Productive Formation

West Columbia field, Brazoria County, yielded its first Frio production last week when Sterling Oil & Refining Company extended the field approximately 2500 feet north in Phillips 1, Geo. Tennilee Survey, at 5290 feet. Phillips 1 made 480 barrels of 26 gravity oil daily through a 3/8-inch choke with a tubing pressure of 200 pounds and a casing pressure of 1080 pounds. The company has made location for Phillips.

At Old Ocean field, Brazoria County, Harrison & Abercrombie were drilling below 10,500 feet in Bernard River Land & Development Company. This well is one of the deepest drilled in the Texas Gulf Coast and holds the length record for setting seven-inch casing. The casing was set at 10,415 feet.

One of the best wells to be completed on the northwest side of Dickinson field, Galveston County, is Atlantic Refining Company's Lippman 1, W. G. Banks Survey. The well made 679 barrels through a quarter-inch choke on a potential test, with a tubing pressure of 1150 pounds and a casing pressure of 1400 pounds from Frio sands at 8150 feet.

After making several tests on Maco Stewart A-19, Humble Oil & Refining Company decided to complete it at 8346 feet after perforating casing with 13 shots. The well made five barrels of distillate per hour along with 3,000,000 cubic feet of gas.

Casing Head Plant for Dickinson

Contract has been let by Humble Oil & Refining Company to Western Supply Company for the construction of a casinghead plant at Dickinson. The plant will have a daily capacity of 25,000,000 cubic feet of gas and is being built at an estimated cost of $250,000. Humble is the largest lease holder in the area and has a number of wells producing gas and distillate. Dickinson has been known for a long time as a high pressure gas field and a number of thin sands are encountered while drilling to the main pay sand.

Completion of Salt Dome Oil Corpora-

TEXAS GULF COAST Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
AMELIA—		
Humble, Bridges 1	600	6778
Fitzgerald 2	655	6777
Gaspard 1	264	6779
Mulligan 1	589	6803
S. Pinchback 4	648	6776
Quinn 4	648	6778
Shelby 1	511	6779
Tyrell Combest C-1	*	6884
Normandie Oil Co., Tyrell Combest 1	689	6779
Stanolind, McCormick 2	542	5388
Sargl 3	488	5452
Sargl 5	520	5390
ANAHUAC—		
Humble, Garth 1	*	7800
Marshall 5	674	7080
Tyrell 17	666	7100
BATSON—		
Dee Tee Dr. Co., Milhome 1	*	3542
BIG CREEK—		
Gulf, Davis 76	169	2760
DICKINSON—		
Atlantic, Lippman 1	679	8150
Humble, Maco Stewart 19-A	120	8346
HARDIN—		
Jack Frazier, Hanchey 1	615	7613
HASTINGS—		
A. W. Crosby, Ross 1 (wo)	530	6118
Humble, Brown 14	599	6090
Stanolind, Autrey 3	647	6080
Curkeet 4	666	6080
Curkeet 8	605	6080
S. Paul 6	640	6080
Schefer 1	672	6080
HULL—		
General Crude, Able 14	350	850
Hamil & Smith, Barngrover et al (perf from 5705-5806 ft)	211	6631
Houston Prod. Co., Hannah 1	857	4982
Republic Prod. Co., Dolbear 162	*	3277
HUMBLE—		
Wilson Oil Co., House 9	30	3157
JOE'S LAKE—		
Republic Prod. Co., Hurd 3	495	7632
LOCHRIDGE—		
Gulf, Wilkes & Smith A-4	123	6375
MAGNET—		
Atlantic, Cockburn Fee 1	240	5540
PALACIOS—		
Glenn H. McCarthy, Foley Land Co. 2	*	8068
PIERCE JUNCTION—		
Rio Bravo, Fee 12	240	4324
SEGNO—		
J. K. Dorrance, S. Wing 3	*	5438
SILSBEE—		
Republic Prod. Co., Brooks 13	275	6855
Brooks 15	¶1½	6915
SOUTH BAY CITY—		
Hammon Expl. Co., Cleveland 2	350	8160
SOUTH COTTON LAKE—		
Salt Dome, Lawrence 2-A	527	6518
SOUTH HOUSTON—		
Stanolind, Bennett 1	224	4800
Drilling District 23, No. 2	240	4052
TOMBALL—		
Humble, Black 2	544	5565
WEST COLUMBIA—		
Sterling, Phillips 1	480	5290
WITHERS—		
Texas Co., Pierce Estate C-33	216	5555
FT. BEND COUNTY—		
Marlen Oil Co., Jurea 1, Needville prospect, H&TC sur No. 26	*	6523

*Failures; †Junked; ¶Million cu. ft. gas.

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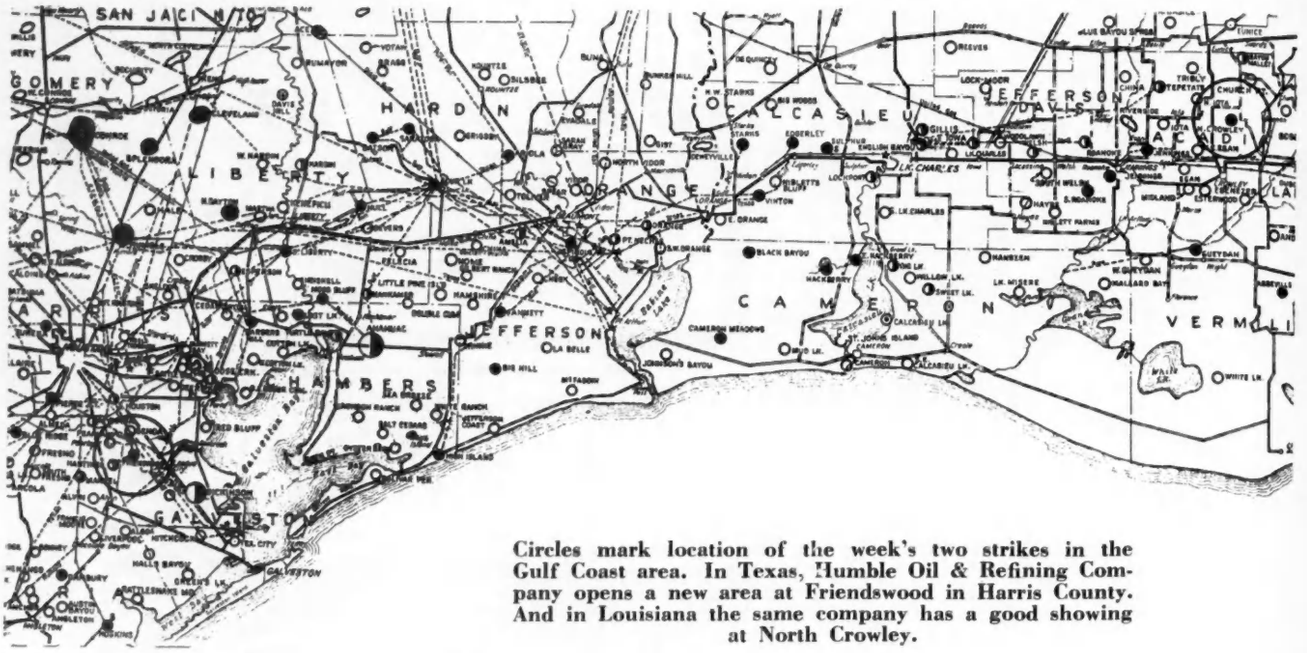


Circles mark location of the week's two strikes in the Gulf Coast area. In Texas, Humble Oil & Refining Company opens a new area at Friendswood in Harris County. And in Louisiana the same company has a good showing at North Crowley.

tion's Lawrence 2-A, South Cotton Lake field, S. Barrow Survey, Chambers County, as a good producer has brought two major companies into the field. Gulf Oil Corporation made location with Salt Dome Oil Corporation for Lawrence 1, 466 feet out of the northeast corner of a 150-acre Gulf lease in the Ben Wenfree Survey. Humble Oil & Refining Company announced location for Lawrence 1, 466 feet west of the east line and midway between the north and south lines the Humble Oil & Refining Company's 98-acre lease in the S. Barrow Survey.

Salt Dome Oil Corporation's Lawrence 2-A, made 527 barrels daily through a quarter-inch choke, with a tubing pressure of 575 pounds and a casing pressure of 1075 pounds from 6518 feet.

Superior Oil Producing Company's Butler 1, Bammel area, J. Ehrhardt Survey, Harris County, is becoming a "mystery" well on the Texas Gulf Coast, not from the lack of information being given out by the operators but from the lack of information as to what formation the well is now in. It is known that the bit is below the Cook Mountain and that the company is in search of the Queen City formation. At 9324 feet, the depth at the end of the week, the well has not logged top of the formation. Butler 1 is the farthest well down dip in the Texas Gulf Coast to drill for that formation.

Second Location For Cheek

After completing one of the largest distillate wells in the Gulf Coast, Magnolia Petroleum Corporation made location for Phelan 2, 933 feet south of the discovery well at Cheek and 70 degrees east in the S. Stivers Survey, Abstract 51. The company's Phelan 1 made 23 barrels of distillate per hour through a ½-inch choke, with a tubing pressure of 2100 pounds and a casing pressure of 2150 pounds from 8460 feet. It was estimated that the well was making 12,000,000 cubic feet of gas daily.

Magnolia Petroleum Company is reported to have paid over $46,000 for a 617-acre tract near the discovery well at Cheek. The tract was purchased from W. C. Tyrell Trust Company.

A potential test was made on the second producer at Joe's Lake field, Tyler County last week. Republic Production Company's Hurd 3, N. Hurd Survey, west of the discovery well, made 495 barrels of 41.6 corrected gravity oil per day through a ¼-inch choke with a tubing pressure of 1350 pounds and a casing pressure of 1200 pounds. Hurd 3 is producing oil from 7632 feet in an undetermined formation. There are several different opinions as to which formation the wells are producing from. Some say it is Queen City, while others maintain it is Wilcox, Sparta or Weeches.

Republic Production Company made location for Hurd 4, 933 feet north of Hurd 3 in the N. Hurd Survey.

Locate Wildcat In Polk County

In Polk County, H. E. Williams & Thompson announced location for W. T. Carter 1, in the H. W. Augustine Survey, Abstract 3. It is 466 feet each way out of the southeast corner of the west 200-acres of the W. T. Carter 589-acre tract in Block 2. The wildcat is between the Segno and Livingston fields, Polk County.

A potential test on Jack Frazier's Hanchey 1, 2½ miles northeast of the discovery well at Hardin field, Liberty County, showed 615 barrels of 37.3 gravity oil daily through a quarter-inch choke, with a tubing pressure of 1050 pounds and a casing pressure of 1100 pounds. Hanchey 1 was completed at 7613 feet in the Upper Saline Bayou and is the best well yet to be completed in the formation.

Humble Oil & Refining Company, the first company to enter Silsbee field, Hardin County, other than Republic and Houston Oil Company, made a production test on Mrs M. L. Kirby 1-B, J. Ellery Survey, last week and recovered mostly salt water. Kirby B-1 flowed 15 barrels of fluid per hour, 30 percent salt water from 6986 feet. The well was killed and screen was pulled. The liner will be perforated with seven shots from 6857 to 6860 feet in Upper Cockfield formation. Humble Oil & Refining Company made location for Kirby 2-B, 933 feet east of Kirby 1-B, J. Ellery Survey, Hardin County.

East of production at Silsbee, Republic Production Company's Brooks 16, J. A. Williams Survey, was making an estimated 1,400,000 cubic feet of gas daily through a quarter-inch choke with a tubing and casing pressure of 2200 pounds. The well was completed at 6915 feet. The same operator's Brooks 13, G. W. Brooks Survey, was flowing 275 barrels daily through a 3/16-inch choke, with a tubing pressure of 875 pounds and a casing pressure of 1275 pounds. The well was completed at 6855 feet. Republic has made location for Brooks 17, 18, and 19.

First Palacios Failure

The first failure of the new Palacios field, Matagorda County, is Glenn H. McCarthy's Foley Land Company 2, east of the discovery well, L. Goodwin Survey. The hole was junked at 8068 feet. McCarthy has skidded derrick over for Foley Land Company 3.

In the Sugar Valley area, Matagorda County, Royal Oil Company's Ewing 1, A. S. Sojourner Survey, was coring in shale at 8053 feet after logging salt water sands at 7908 to 7925 feet.

Northwest of the discovery well at Magnet, Wharton County, Atlantic Refining Company's Cockburn Fee 1, Smith & McKenzie Survey, was making about 13 barrels of pipe line oil per hour through a quarter-inch choke from 5540 feet.

On the Needville prospect, Fort Bend County, Marlen Oil Company abandoned F. Jurea 1, H. & T. C. Survey, Section 26, at 6523 feet after the well attempted to blow out.

Shreveport.—Phillips Petroleum Company has resumed work on its polymerization plant in the Cass County, Texas, part of the Rodessa field, which had been halted for several months.

SOUTH LOUISIANA

Humble's North Crowley wildcat may be field opener.

* * *

Test on Jefferson Island logs more oil showings.

Lake Charles.—North Crowley may be a new oil field in the Louisiana Gulf Coast. Humble Oil & Refining Company made a drill stem test on Federal Land Bank 1, Section 34-8s-1e, and showed 1170 feet of pipe line oil along with 180 feet of oil cut mud through a quarter-inch choke in 11 minutes from 8086 to 8106. The wildcat showed a pressure of 125 pounds.

Instead of making a production test at 8106 feet the company decided to drill Federal Land Bank 1 deeper. If no new sands are found the hole will be plugged back for a test.

Three Previous Tests Failed

Federal Land Bank 1 was spudded April 26, 1937, and 16-inch casing was set at 220 feet. After drilling to 3015 feet a string of 10¾-inch casing was set. A broken formation was encountered showing oil at 7929 feet, three drill tests were attempted. The sand to be tested was at 7929 to 7939 feet, but the tool slipped to 8009 feet and the crew recovered 180 feet of gas cut mud, 690 feet of salt water and 60 feet of sand through quarter-inch chokes on top and bottom of the testing tool. After making the drill stem test 20 feet of drill pipe was lost in the hole which forced a plug back operation. After side tracking at 7425 feet the hole was drilled to 8106 feet where the drill stem test showed commercial oil.

Humble Oil & Refining Company has approximately 9000 acres in the North Crowley block, which was taken in 1935 after the area was worked with reflection seismograph. Several other major oil companies have scattered acreage in the area.

Fenton Wildcat Shows Salt Water

In the Fenton area, Jefferson Parish, Louisiana Crusader Oil Company's Langley 1, Section 36-7s-5w, was plugging back to test a higher level after showing salt water at 8965 feet. Casing was perforated with 10 holes from 8957 to 8965 feet. There was considerable trouble with gas. The completion was delayed until mud was conditioned. After the well was under control the hole was washed and it came in flowing a large amount of salt water and gas. No oil showed in the return column.

Re-Complete Long Lake Discovery

Fohs Oil Company & Pilgrim Exploration Company recompleted State Long Lake 1, discovery well for Long Lake field, Section 65-17s-19e, Lafourche Parish, last week after mechanical difficulties were overcome. The well came in flowing 400 barrels of pipe line oil daily through an 11/64-inch choke, with a tubing pressure of 1400 pounds and a casing pressure of 900 pounds. State Long Lake 1 was completed after casing was perforated with 20 shots from 9365 to 9373 feet. Before trouble was encountered the well made 890 barrels daily through a quarter-inch choke, with tubing and casing pressures of 1400 pounds.

The companies have made location for State Long Lake 2, 1320 feet north and west of the discovery well, or 2820 feet west and 9500 feet north of the southeast corner of Section 77-17s-19e, but in Section 65, and are moving in a drilling barge.

Second New Sand at Charenton

Approximately 2000 feet southeast of production at Charenton field, St. Mary Parish, Pan American Production Company was preparing to make a production test on South Coast Corporation 1 in a new sand at 8503 feet. The well was drilled to 8503 feet and sand showing oil was logged from 8420 to 8447 feet. Liner was set onto seven-inch casing and will be perforated at the new level. The well discovered a new sand some time ago and extended Charenton field. The new sand was found at 7923 feet, but after the well came in flowing pipe line oil it started making salt water. The hole was killed and drilled deeper.

Northwest of production at Charenton, Pan American Production Company's Lawes 3, Section 25-13s-9e, was abandoned at 8838 feet.

Jefferson Island Test Looks Good

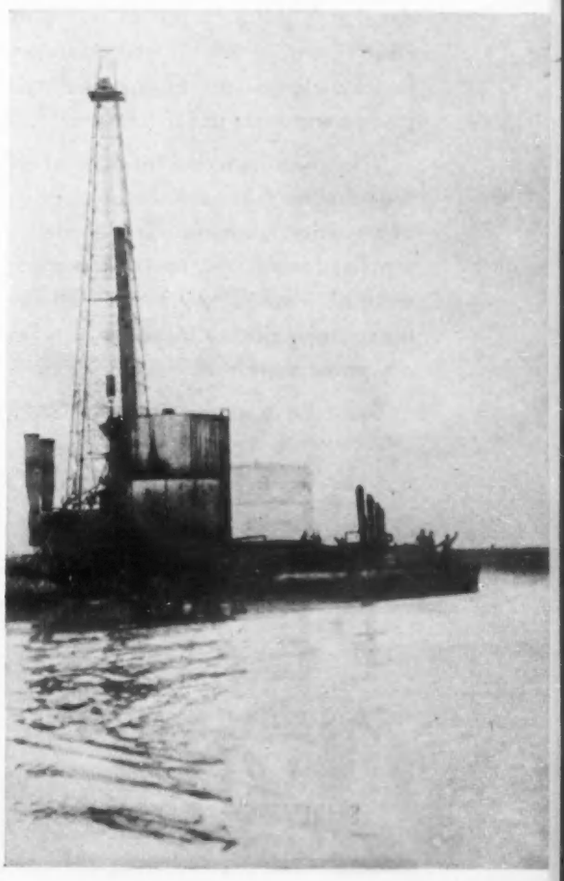
A core record of Jefferson Lake Oil Company's Lake Peigneur 414, Jefferson Island dome, 12s-5e, Iberia Parish, indicates that the wildcat stands a good chance of becoming the discovery well of a new field in the South Louisiana area.

Lake Peigneur 414 was drilled in sandy shale with an odor of oil at 6843 feet at the end of the week after logging top of the odor at 6817 feet. The crew has cored from 6570 to the presente depth and has encountered several encouraging sands of which prob-

SOUTH LOUISIANA Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
CHARENTON—		
Pan American Prod. Co., Lawes 3.	*	8858
ENGLISH BAYOU—		
Fohs Oil Co., Castle 18.....	375	7038
IOWA—		
Shell, Heyd 25	409	4450
JENNINGS—		
Cosmo Pet. Co., Fee 4.....	8	2121
Stanolind, Houssiere Latrielle 18...	513	6680
SORRENTO—		
Sorrento Oil Co., Bernard 1.....	*	6734
VALENTINE—		
Pan American Prod. Co., Harange 1-A	611	5414
WEST HACKBERRY—		
Stanolind, M. Duhon 4.....	286	4574
Carter Sweeny 7	490	4330
WHITE CASTLE—		
Shell, White Castle Shingle Co. .4.	*	9127
EAST BATON ROUGE PARISH—		
Cavalier Oil Co., Annison 1, 33-4s-1w	*	4801
LAFOURCHE PARISH—		
Fohs & Pilgrim Exploration Co., State 1, Long Lake area, 65-17s-19e	890	9406
ST. MARTIN PARISH—		
Joe E. Lilly, Martin 1, Section 28 prospect, 32-10s-7e	*	4450

*Failures; †Junked; ¶Million cu. ft. gas.



Fohs Oil Company and Pilgrim Exploration Company's State Long Lake 1, discovery well, Lafourche Parish, is located in the center of the deepest producing district in the world, surrounded by Gibson, producing from 9400 feet; Lirrette, producing at 11,620 feet; and Lafitte, producing from 10,200 feet. All four of the fields are producing from Miocene and have possibilities deeper in the Frio formation.

ably the best was from 6620 to 6632 feet. Some time ago a production test was made around 6945 feet and the well made a small amount of oil and salt water. For this reason the hole was plugged back and redrilled to 6843 feet.

At Fausse Point, Iberia Parish, The Texas Company was preparing to make a drill stem test on State Fausse Point 3, Section 35-11s-6e, at 4038 feet. Sand showing oil was logged from 4004 to 4016 feet, and from the latter depth to 4037 feet salt water sand was cored. An electrical logging device showed the sands from 4004 to 4016 feet to have four ohms resistivity and 120 milivolts porosity. If the drill stem test is encouraging 7⅝-inch casing will be run for a production test.

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●

AMERICAN INDUSTRIAL PEACE ASSOCIATION

P. O. BOX 1080

SHREVEPORT, LOUISIANA

NORTH LOUISIANA

Rodessa-in-Arkansas gets 10 locations.

* * *

Deep test in prospect for Shongaloo area.

* * *

Another gas-distillate well at Cotton Valley.

Shreveport.—With 10 new locations announced in the vicinity of W. L. McClanahan and associates' Capps 1, SE SW 11-20-28, Miller County, Arkansas, that extended the producing limits of the Gloyd horizon of Rodessa across the Arkansas line, authorities and operators of that state face the problem of whether or not to place a proration on this new field and what regulatory measures to take in its regard.

The extension well during the last week gauged 607 barrels of oil in 24 hours flowing through a small opening in the gate valve. For the 24-hour period ending Thursday, July 1, the well through a smaller opening gauged 457 barrels of 41 gravity oil. Gulf Pipe Line Company is laying a line to the well.

Conservation authorities of Arkansas have announced that an informal hearing will be held at Texarkana on July 7 at which time problems dealing with the Arkansas side of Rodessa will be discussed. In the meantime, it is announced that drilling on the Arkansas side of the field will be held to one well to each 10 acres. As this is a smaller restriction than either the Louisiana or Texas parts of the field it is not known what effect this will have on present development.

Officials of Arkansas have given assurance that nothing will be permitted in the development of either the Schuler or Arkansas Rodessa extension to "upset the applecart" of the present oil marketing situation.

However as Arkansas has had a dearth of oil production for several years its average even with four producing wells at Schuler being less than 30,000 barrels daily, it is regarded as likely that Arkansas will go slow in clamping on a tight lid until its production comes within something like the level of production in adjoining states.

Chairman O. C. Bailey of the Arkansas Board of Conservation, following a conference with Governor Carl E. Bailey of Arkansas declared that Arkansas will take steps to pro-rate both Schuler and the Arkansas Rodessa extension if these fields develop into major pools.

"Informed oil men are confident that the Schuler field and the Rodessa extension in Miller County will develop into major pools. At present there is not sufficient oil produced in Arkansas to make proration necessary but if future drilling does develop these fields, the state will regulate production so that Arkansas will not upset the national applecart of the oil industry."

Texas and Louisiana are both expected to have unofficial observers at the hearing scheduled at Texarkana July 7.

Aside from the new Miller County, Arkansas, extension producer, chief operating interest at Rodessa last week was centered on the recent 8½-mile outpost part of the field in Marion County, Texas, where The Hunter Company recently completed E. W. Fonda 1, A. de los Santos Coy Survey, as an oil producer from the Gloyd horizon.

The same company's E. W. Fonda 2 in the same survey, one location northwest of Fonda 1, had 7-inch casing cemented after logging 18 feet of saturation in the Gloyd. Total depth is 6095 feet. Two locations east of Fonda 1, Arkansas-Louisiana Gas Company's Allen Houston 1 was coring just above 6000 feet not having cored the Hill horizon. Four other tests in the same survey are drilling as follows: Fohs Oil Company, Mary McReynolds 1, drilling 4670 feet; Mid-Continent Petroleum Company's Sory 1, drilling 5110 feet, and Arkansas-Louisiana Gas Company's Fant 1, drilling 2495 feet. United Production Corporation changed location for J. H. Hutchinson 1, same survey, and is rigging up.

Two more producers in busy Lisbon field

Shreveport.—Two more producers were completed last week in the Lisbon field where 18 tests are actively drilling and eight others are rigging up.

J. C. Tippett's H. E. Patton 2, Section 36-21n 5w, is flowing 27 barrels per hour through 20/64-inch tubing choke at 5307 feet with casing pressure 950 pounds, and tubing 450 pounds. P. W. Woodruff completed McDonald A-1, in the same section, flowing 30 barrels per hour through 22/64-inch tubing choke at 5277 feet. Tubing pressure was 260 pounds.

Eight miles southeast of Lisbon, H. D. Easton and Belmont-Quadrangle Drilling Company's G. W. Dye 1, NE

NE 21-19n-4w, was drilling below 5718 feet in shale and believed nearing the basal Glen Rose horizon, which is productive at Lisbon. Glassel and Glassell abandoned A. P. Gray 1, Section 16-20n-3w, as a dry hole in Travis Peak at 5620 feet.

Lisbon, discovered June 16, has produced 355,014 barrels

Shreveport.—Accumulate production of the Lisbon, Louisiana field to June 16 was 355,014 barrels, with the H. E. Patton lease of Red Iron Drilling Company and Scout Oil Company, on which are two producers, leading with a total yield of 44,463 barrels. E. T. Oakes and associates' Patton Estate 2, NE NE 1-20n-5w, discovery well of the field, had a cumulative production to that date of 14,765 barrels.

Louisiana grants 36 permits for new wells

Shreveport.—Thirty-six drilling permits were authorized last week by the minerals division, Louisiana conservation commission; 21 were for North Louisiana, divided among the following parishes: Claiborne, six; Caddo, four; Lincoln, four; Ouachita, two; Red River, one; and Union, four. Those in South Louisiana were divided among the following parishes: Calcasieu, three; Cameron, two; Iberia, one; Iberville, one; Jefferson Davis, one; Plaquemines, five; St. Mary, one; and Terrebonne, one.

Another completion in Bodcaw at Cotton Valley

Shreveport.—The lower Marine (Bodcaw) horizon below 8000 feet accounted for another gas-distillate producer in the Cotton Valley field last week when Ohio Oil Company's R. M. Coyle 2, Section 22-21n-10w, was completed at 8503 feet gauging 375 barrels of distillate and 4,000,000 cubic feet of gas in 24 hours.

On the north side of the Sugar Creek field where there are now three oil producers from the Travis Peak, United Gas Company was ready to drill plugs and test Caskey 1, Section 7-19n-5w, at 5702 feet after 5¾-inch casing was cemented at 5637 feet.

Grogan Oil Company was also preparing to drill plugs and test Ramsey A-1, SE NW 26-11n-11w, which recently showed 22 joints of oil in a drill-stem test in the aPluxy at 2961 feet.

Texas boiler inspection hearing set for July 8

Austin.—The State Labor Commission will hold a hearing in Austin July 8 on rules for the enforcement of its new boiler inspection law.

Temporary rules are being drafted but will not be completed until the day before the hearing, since persons coming from outside the state to discuss the terms of the initial draft cannot arrive before that time. The rules will cover the "construction, installation, use, maintenance and operation" of boilers.

Magnolia expected to drill 8500-foot test in Shongaloo

Shreveport.—It is regarded as probable that the contemplated 8500-foot test for the old Shongaloo gas field, Webster Parish, will be drilled by Magnolia Petroleum Company in cooperation with other lease holders in that area.

Hunt Oil Company is reported negotiating with Seaboard Oil Corporation for half interest in the latter's large block in Bienville Parish around Section 3-16n-6w. If these negotiations are consummated, three tests will be drilled immediately. Seaboard has one gas-distillate producer in that section at present.

The California Company is negotiating with the Tensas Delta Land Company for a geophysical option on approximately 125,000 acres in Townships 4, 5, 6, and 7 north, Ranges 3, 4, and 5 east, in Catahoula Parish. The California Company is said to favor an extensive geophysical exploration of all promising structures across Louisiana in the "trends" where large blocks can be secured for geophysical option. This company has been busy in recent months in geophysical work in southwest Mississippi.

NORTH LOUISIANA Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
BOSSIER PARISH (Sligo)—		
United Gas, Jeter A-1, 24-17n-12w	¶21	5148
CADDO PARISH (Rodessa)—		
Idessa O&G Co., Sumner 1, 10-23n-15w	*	6197
United Gas, Fee 7, 16-23n-16w	512	5940
CLAIBORNE PARISH (Lisbon)—		
T. L. James & Co., Baker 1, 25-21n-5w	*	5343
J. C. Tippett, H. E. Patton 2, 36-21n-5w	750	5307
P. W. Woodruff, McDonald A-1, 36-21n-5w	720	5277
LINCOLN PARISH—		
Glassell & Glassell, A. P. Gray 1, 16-20n-3w	*	5620
WEBSTER PARISH (Cotton Valley)—		
Ohio, R. M. Coyle 2, 22-21n-10w	¶4 & 375	8503

*Failures; †Junked; ¶Million cu. ft. gas.

May Drill Deep One at Bellevue

Premier Investment Company, which owns a large amount of the shallow producing acreage in the Bellevue field, Bossier Parish, around Section 16-19n-11w, is reported planning a deep test. This is the highest point geologically on the Sabine Uplift. Several companies have been doing geophysical work in recent months around the flanks of this structure, especially since the discovery of oil in the Sligo district. South of Sligo, in Township 16 north, Range 12 west, Magnolia Petroleum Company has been leasing, and in the same parish in Township 18 north, Range 11 west, R. W. Williams, representing a large company, has been leasing.

Ohio Oil Likes Old Haynesville

Ohio Oil Company is trying to extend the leases on all of its holdings in the old Haynesville field in Township 23 north, Range 8 west, where it was the predominant producer, by paying a bonus on leases that have become depleted in the Ozan horizon around 2800

3,965,000,000

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SHREVEPORT, LOUISIANA

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Lake Charles—Houma—Converse
New Iberia—Rodessa—Monroe—Cotton Valley—Turnertown—Greggton—Houston

feet. United Gas Public Service Company recently has been taking some leases in this field.

Following in the wake of an extensive seismic survey made by Ohio Oil Company in Townships 22 and 23 north, Range 10 east, West Carroll Parish, considerable leasing is being done by A. R. Wherritt and Gordon Collins. In Winn Parish around Section 5-10n-2w, Texas Company has been taking leases recently and in the same parish around Section 35-13n-3w, Mid-Continent Petroleum Company has been a recent lease purchaser.

ARKANSAS FIELDS

Erwin planning Glen Rose test on 4000-acre block

El Dorado.—Andrew V. Erwin and associates are said to be planning an early Glen Rose test on a block of approximately 4000 acres centering around Section 2-18-27, Miller County. In the same county Magnolia Petroleum Company has been leasing recently in Township 16, Range 28.

Deep Rock Oil Company has been acquiring leases recently in Columbia County in Township 19, Range 19.

Schuler Most Active

The Schuler district, Union County, continues the most active area in south Arkansas, due to the fact that from the top of the Travis Peak to the water level as at present indicated is over 315 feet and the fact that a one-half mile north outpost test in Schuler, Alice Sidney Oil Company's Powledge 1, topped the Glen Rose only one foot lower than the northernmost producers in Section 18-18-17, in the field proper.

Gulf Oil Corporation has been the heaviest buyer in recent days in Schuler, having acquired several hundred acres in Townships 17, 18 and 19, Ranges 16 and 17. Report of a contemplated test in that area has caused an avalanche of leasing around Sections 35 and 36-18-18 and Sections 1 and 2-19-18.

Fourth Schuler well freed from salt water

El Dorado, Ark.—Lion Oil Refining Company's Edna Morgan B-1, Section 18-18-17, Schuler field, Union County, that showed some salt water with oil when tested from 5797 to 5826 feet and was plugged back to 5790 feet, was successfully completed last week with elimination of the salt water. It is Schuler's fourth oil well.

After casing was perforated with 20 shots from 5731 to 5737 feet the well was completed flowing 86 barrels of oil the first hour and later flowing 40 barrels of oil per hour through quarter-inch tubing choke with casing pressure 1750 pounds and tubing, 1475 pounds. The well is also making 9,250,000 cubic feet of gas daily.

Ten other tests in Schuler are drilling, deepest of which is Alice Sidney Oil Company's Powledge 1, SW SE 7-18-17, one half mile north of production which is drilling below 5490 feet.

Seven of 10 Arkansas permits for Rodessa

El Dorado. — Ten drilling permits were authorized last week by the Arkansas board of conservation. Seven were for the recently opened Rodessa extension in Miller County. The Miller County permits are: F. W. Burford, J. O. Gerrald 1, 330 feet south and west NEc frac section 15-20-28; L. A. Hawkins, Treadway 1, 330 feet north of south line and 165 feet west of east line SE NE 10-20-28; Frank Loda, Treadway 1, 165 feet west of east line

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ARKANSAS

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
DALLAS COUNTY—		
J. C. Voyles, Sorrells 1, 35-10-16..	*	1672
LAFAYETTE COUNTY—		
Nivla Oil Corp., DeLay 1, 19-15-24	*	4503
MILLER COUNTY (Rodessa)—		
W. L. McClanahan et al, Capps 1, 11-20-28	607	6113

*Failures; †Junked; ¶Million cu. ft. gas.

and 92 feet north of south line NE SE NE 10-20-28; B. A. Skipper, D. B. Womack 1 to 4, inclusive, located respectively 715 feet east and 330 feet north SWc NW SW 11-20-28; 715 east and 330 south NWc NW SW 11-20-28; 330 south and east NWc NW SW 11-20-28; and 330 north and east SWc NW SW 11-20-28.

Other permits were: Madison County —J. E. and John Hardy, Hamlin 1, 330 north and east SWc NW SE 8-16n-26w; Union County—Marine Oil Company, E. M. Jones 1, 330 east and 300 north SWc NW SW 17-18-17; Alice-Sidney Oil Company, D. S. & J. C. Morgan 2, 330 north and west SE NE SE 18-18-17.

Phillips starts first of two delta area tests

Jackson, Miss. — Phillips Petroleum Company has spudded one 6000-foot test and is rigging up on another in the Mississippi delta area. It has spudded Perthshire 1, located 4620 feet south and 660 feet east NWc 2-24n-7w, Bolivar County, using a Diesel engine and is rigging up for Dockery 1, SW NE 27-22n-4w, Sunflower County.

In the southwest part of the state, Charles Green and associates are rigging up for Taylor 1, C SW 4-3n-1e. A. B. Taylor and associates are rigging up Miss-Wis Land & Timber Company 1, NW SW SW 34-4n-1w, in the same county.

In southwestern Amite County, south Mississippi, McAlister and associates have been assembling a large block of acreage.

In LaFayette County, north Mississippi, Westbrook, Thompson and Stewart are reported renewing leases on a block around Section 9-10s-1w, where a test was drilled to 2465 feet.

State of Mississippi through its state leasing commission has been seeking bids for two Midway chalk gas tests on its 1320-acre state-owned lease in the north end of the Jackson gas field.

Miami, Florida.—Gulf Oil Corporation's two gravimeter units are ready to begin work on the 1,000,000-acre geophysical lease this company secured in Collier County, Florida, several months ago from Clem S. Clarke of Shreveport, who retained an interest in the holdings. The units are making headquarters at Everglades, Florida.

CALIFORNIA FIELDS

Cores negative, but "mystery test" makes good well.

* * *

Wilmington lists 48 drilling tests and 29 rigs.

* * *

Test reveals possible new field for Kern County.

Los Angeles.—Cores showed nothing of any importance and the well started its producing life with a healthy flow of fresh water, yet Standard Oil Company of California's Refinery 1, northwest flank test at El Segundo, turned out to be a 984-barrel well when recently completed at 7171 feet. Moreover, a few days after completion the flow increased to 2472 barrels and the gravity dropped from 27.8 initially to 26.5 degrees.

Some are calling Refinery 1 the "mystery" well of California. Others cite its performance as further evidence of the erratic character of El Segundo producing horizon conditions. Except in one instance, core recovery on the test was rated perfect.

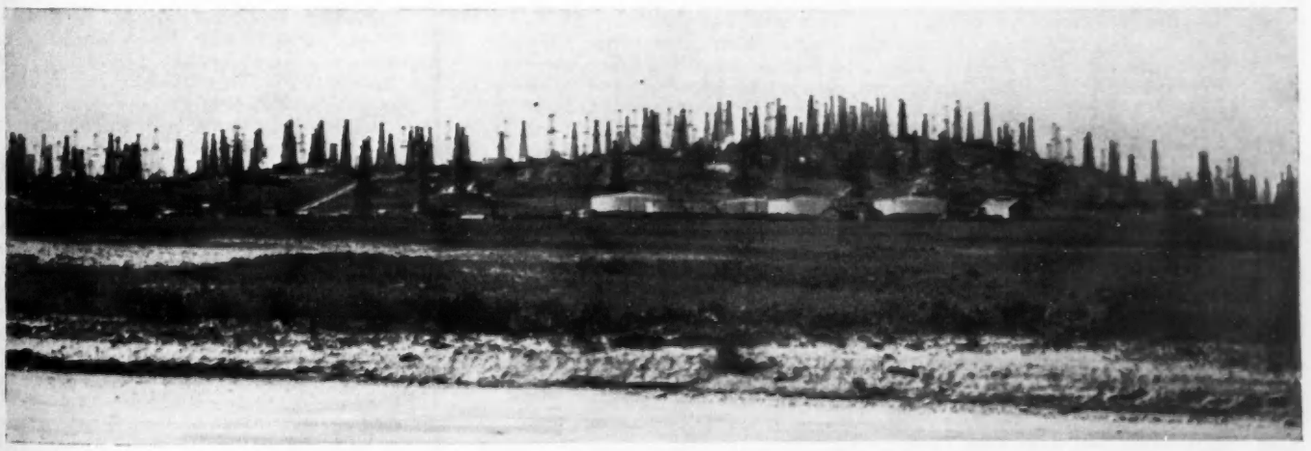
The well was making 1,820,000 cubic feet of gas, and the pressure on the tubing was 210 pounds and on the casing, 215 pounds, the flow being through one one-inch and a ¼-inch choke. The 8⅝-inch casing was cemented at 7054 feet. The hole penetrated 100 feet of the Schist and seven feet of the conglomerate. Some think the flow is from fractures in the Schist.

Only six wells are actively drilling in El Segundo, and it is doubted if any new holes will be started until they are completed. Republic Petroleum Company's El Segundo 2, bottom at 7477 feet, landed 174 feet of 4¾-inch, including 74 feet of perforated, at 7477 feet and is being acidized. If production is not improved, the hole probably will be drilled deeper.

Wilmington Busiest

Wilmington, near Long Beach is the busiest area in California. General Petroleum Corporation's Ford 3, trying for a deeper zone, made a test with bottom at 5355 feet and flowed 273 barrels of 28.9 gravity oil in 12 hours, after landing 473 feet of 4¾-inch liner, including 311 feet of perforated, at 5355 feet. The well has been killed, liner was pulled, and it is expected it will be cored deeper.

Operators in this field recently held a meeting and they decided they would be willing to curtail production 50 percent, with no well being permitted to produce over 400 barrels a day. Then a committee was appointed to contact a major pipe line company to seek a pipe line outlet for the field. The field could easily produce in excess of 50,000 barrels a day, but two or three of the larger companies have considerably reduced production, until the field is now



Most pictures of Signal Hill are taken from the north side. Here is one showing the south side. Many of the rigs of flush production days have been taken down.

producing around 41,000 barrels a day, against an allotment of 19,000 barrels.

One Well Per Acre in New Area

Scout reports recently showed that 48 wells are actively drilling in the field, and there were 19 new locations and 29 rigs.

The proven area of Wilmington reaches into Long Beach and a vote recently threw open a large area to drilling. Wells will get started soon in this new water front area. One well will be allowed to one acre.

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The older wells are showing bad sand conditions and pumps are being cut out fast. This situation is having much influence in bringing operators to the point where they are willing to curtail. It has been found that under proper curtailment, sand conditions are not so bad. Much of the oil is selling at about 60 cents a barrel at the well. Purchasing independent refiners prefer the Wilmington crude to some other crudes available for spot sale, although the sulphur content is fairly high—about equal to oil from the Playa del Rey field.

May Link Two Fields

An interesting wildcat project in Los Angeles Basin in Carson Oil Company's proposed test about half way between the old Torrance field and the New Wilmington area. The company will attempt to link the two producing areas. Other concerns holding leases in this area feel it's a good bet and will help out. Carson Oil Company holds a lease on 79 acres of the Strassburg estate, located close to L street and Figueroa street. Derrick is up now.

The outpost test of Kettleman North Dome Association, No. 4-18J, Section 18-21-17, Kettleman Hills, with bottom at 10,751 feet, will soon get a production test. Top of the Eocene Avenal—sandstone, encountered at 10,713 feet, is said to correspond to the formation cored in the Lillis-Welch wildcat at 19,831 feet. The latter showed good oil cuts.

McGunden Area Well Produces

Maybe Kern County has another new field. The joint test being drilled by Superior Oil Company and Jergins Trust in the McGunden area, Crome Community 2, Section 36-29-28, was deepened from 2775 feet to 2794 feet, and on a pumping test made 225 barrels of 17 gravity oil, cutting 50 percent, in 30 hours. The wildcat is located four miles east of the Bakersfield city limits. The companies hold under lease slightly in excess of 600 acres in that area. The well itself was drilled on a community lease of slightly better than 60 acres. Further work is to be done on the well.

In the Wasco area of Kern County, Seaboard Oil Corporation and Tide Water Associated Oil Company's Continental C-1, Section 26-27-24, is drilling in brown shale at 10,015 feet. Brown shale was topped at 7900 feet, giving that formation a thickness of better than 2000 feet.

In the Rio Bravo area of Kern County, brown shale continues to predominate in Union Oil Company's Kernco 1-34, Section 34-28-35, with bottom at 9435 feet. This test is being watched closely, since it is understood that an extreme depth may be attempted.

For several years, attempts have been made to prove production in the Devil's Den area in Kern County. Numerous tests have proved to be teasers. They found formations giving fair cuts, but no commercial production. In Amerada Petroleum Corporation's Beer 4, depth 2670 feet, eight feet of oil sand has been cored and a wall scraper is being run, preparatory to a production test. Formation tester was also run and the results were encouraging.

The deep test drilled to 12,618 feet by Superior Oil Company and Union Oil Company in the Ten Section area of Kern County is being abandoned. It was tested by stages and the last test of the zone from 6650 to 6715 feet showed water. Drilling at this well stopped when the drill pipe was stuck.

It is indicated that Ring Petroleum Company's Shapiro 1, Section 32-26-28, will extend the Poso Creek field nearly a half mile. Total depth is 1735 feet and oil sand was cored from 1685 feet to bottom. A string of 8⅝-inch is being cemented at 1693 feet.

CALIFORNIA

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
EAST COYOTE—		
Standard, Coyote 2-10	200	4800
EL SEGUNDO—		
Standard, Refinery 1	2470	7171
HUNTINGTON BEACH—		
Tide Water Associated, Miley Keck 55	40	3615
WILMINGTON—		
Bankline Oil, Class. Yards 2	195	3497
General Pet. Corp., Ford 11	670	3100
Pacific Western, Russ Com. 1	200	2829
Royalty Service Corp., Nelson B-2	250	3664
B-5	700	3495
Union Pacific Ry. Co., Offset 26	1440	3476
34	2245	3120
KETTLEMAN HILLS—		
Kettleman No. Dome No. 61-4P	2455	8350
GREELEY—		
Standard, No. 11-5	800	7800
MOUNTAIN VIEW—		
Hogan Pet. Co., Bankline-Symons 3	1250	5648
Savoy Oil Co., Whittiken 2	*	5044
MIDWAY SUNSET—		
Standard, No. 51-33d	35	2835
Texas Co., Midway 22	645	3102
Valley Oil Co., No. 1	*	3170
MOUNT POSO—		
General Pet. Corp., Heisen 7	475	1722
ROUND MOUNTAIN—		
Honolulu Oil Corp., No. 21	540	1933
Shell, Olcese 1	200	1909
Calif. Western, Durnal 2	*	984
Patton-Baldwin Oil Co., No. 1	*	2080
EL CAPITAN—		
Shell, Covarrubias 1-22	200	2884
ADAM—		
Union Oil Co., Russell 1	275	4579
VENTURA AVENUE—		
Tide Water Associated, Lloyd 60	125	7170
VENTURA COUNTY—		
Texas Co., Lloyd-Butler 2	*	2960
KERN COUNTY—		
Hall Baker Co., No. 11-1	*	2375

*Failures; †Junked; ¶Million cu. ft. gas.

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At the Panhandle Engineering Society meeting Feb. 24, 1937, an official of a large oil company reported the following: "We have been having great success with a Franks pulling machine—complete with pulling equipment, truck and telescoping mast—in pulling rods and tubing on our wells. The machine eliminates the necessity of derricks and permanent or portable masts over the wells. We are now taking down about 80 derricks which will not be replaced. This unit can be set up and rigged up within a few minutes, is cheaply operated, and can pull rods and tubing as well as they can be pulled with either a portable or permanent mast. The cost of this Franks unit is approximately $7,500 complete with mast, winch, truck, etc."

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EASTERN FIELDS

Companies pushing drilling programs in Illinois.

* * *

Carter starts Indiana wildcat near Prairie Creek.

Pittsburgh. — Major companies and independent operators are forcing development programs in Illinois fields, particularly in the Basin area, pushing the state once more toward the position of leadership it enjoyed in the oil industry before huge strikes were made in the Mid-Contiennt area.

Following big leasing play during the past year, operators are rushing drilling in the wake of sensational (for an Eastern field) strikes by Pure Oil Company on the Bunny Travis and Sarah M. Bechtel farms, both in Clay County. Bunny Travis 1, SW NE Section 33-3n-8e, Clay City Township, had initial production over 2500 barrels daily, which has since settled to a steady yield of 1400 barrels. Depth is 2960 feet and production is from the McClosky sand of the Lower Mississippian series, topped at 2950 feet. Sarah M. Bechtel 1, NE SE NW Section 33-3n-8e, Clay City Township, bottomed at the same depth, had production ranging from 1300 to 1700 barrels daily last week, the first since entering the pay sand.

Pure Leading Development

Pure Oil Company, which has 300,000 acres leased in Illinois, spudded Sarah M. Bechtel 2, southern offset to Bunny Travis 1, on June 26 and was to spud in the Albert Travis 1, northern offset to the Sarah M. Bechtel 1, this week. Loughlin Brothers, Tulsa, have the drilling contract for Bechtel 2, while Pure Oil will use its own equipment on the Albert Travis test. This company's B. W. Mosely 1, NW NE NE 4-2n-8e, Clay City Township, was drilling below 1000 feet as the week closed.

Wiser Oil Company's test on the Damon Smith farm, using a 120-foot derrick and a rotary rig powered by electricity furnished by two Diesels, the first to be used in this section, is attracting considerable attention.

After a month's shutdown caused by collapse of the casing, drilling has been resumed at 2725 feet on Dee and Carter's J. H. Hamilton 1, SW NW 20-4s-3e, Spring Garden Township, Jefferson County. Elevation is 429 feet.

Carter Oil Company started its first midwestern test early last week near Prairie Creek, Vigo County, Indiana, SE NE Section 16-10-10w, with a machine capable of drilling to 3500 feet. It was below 1000 feet as the week closed. Carter will start its first Illinois well within two weeks about 2½ miles north of Kinmundy, Marion County, east of the Patoka pool. Location is NW SE Section 4-4n-3e.

Kachelmacher Estate completed the largest producer of the week on the E. P. Davis farm, Section 30, Monroe Township, Perry County, Ohio, bottomed at 3667 feet in the Clinton sand. It produced 100 barrels the first day after a shot. Allegheny Oil Company has a three-barrel producer in Thomas and Mary Monahan 16, Section 33, Pleasant Township, bottomed in the Berea sand at 1073 feet. The remaining completion in this county was a failure of Daily Crude Oil Company on the Robert Deaver farm, Section 2, Monroe Township, drilled to 1163 feet.

Mid-East Gas Company has a four million cubic foot gas well in S. B. Bowman 4, Section 32, Wayne Township, Muskingum County, producing from the Clinton sand and bottomed at 4126 feet.

Heavy rains during the past week have hampered operations in many Ohio fields.

Lyons & Company completed E. D. Longenbaugh 1, Section 21, Plain Township, Stark County, bottomed at 4597 feet, and it gauged 1,100,000 cubic feet afer a shot. The Clinton sand was at 4575-91 feet.

Eight Kentucky Producers

Eight producers were completed in Kentucky, largest of which were two 25-barrel wells in Lee County. Five gas wells, headed by a 10,000,000 cubic foot gasser, completed the state's list of finished wells. The Lee County tests were by McGann & Garrison on the Andrew Combs tract, Big Sinking District, bottomed at 1002 feet, and by South Penn Oil Company on the Flahaven Land Company lease, Town Hollow, bottomed at 1146 feet. Warfield Natural Gas Company completed J. R. Fairchild et al 1, on Calf Creek of Tug River, Martin County, which is gauging 10,170,000 cubic feet from the Big Lime formation. It is bottomed at 1442 feet. This same operator completed Nancy Cornette 1 on Coldwater Fork, same county, at 3104 feet. It gauges 300,000 cubic feet.

Only routine operations were completed in West Virginia. No completions were recorded in the Oriskany deep sand gas field of Kanawha County.

Four completions were recorded in southwest Pennsylvania, largest of which was a 15-barrel producer by Union Gasoline & Oil Corporation's H. L. Day 2, South Franklin Township, Washington County, bottomed below the Fifth sand at 2875 feet. Victor D. Behm et al completed a 550,000 cubic foot gas well on the Lucy Smith farm, South Strabane Township, same county. It is producing from the Injun sand and is bottomed at 1910 feet.

Leasing activity in Indiana, particularly in Knox and adjoining counties, contiuues at a rapid pace, with Carter Oil Company, Midwest Development Company, Parshall Graham Oil Company and Charles Martin among the most active. Leases, for the most part, are being signed for five years.

Would formulate 10-state alliance to exchange data

Buffalo, N. Y.—A move to formulate an alliance of ten states to exchange data on the oil industry has been undertaken by Assemblyman Harold B. Ehrlich, chairman of New York's joint legislative committee to investigate the oil and gasoline industry.

Ehrlich announced he has written chairmen of similar committees in Pennsylvania, New Jersey, Massachusetts, Wisconsin, Michigan, Illinois, Washington, Virginia and Kansas, suggesting a conference of heads of the committees to establish a program of united action.

He said the conference should give consideration to establishment of public control and regulation of the gasoline and oil industry by state or federal agencies and to establishment of uniform fuel grading laws to assure the public high quality gasoline and oil at minimum prices. He suggested a three-day meeting.

"Such a conference," Ehrlich said, "would afford opportunity for the fullest discussion of findings to date, along with consideration of all phases of the motor fuel question in its many aspects."

1297 United States ships using fuel oil, bureau says

Washington, D. C.—Registered vessels in the United States include 1297 with an aggregate cruising radius of 12,430,960 miles that burn fuel oil, according to C. F. Mayne, bureau of marine inspection and navigation, department of commerce. While these vessels represent a combined gross tonnage of 7,111,107, their tankage capacity is 1,025,341 tons. Their deadweight tonnage totals 10,132,599, while their total bunker capacity amounts to 463,344,421 tons. Of the 1297 ships, 898 fly flags of Atlantic and Gulf Coast ports, the remainder having home ports on the Great Lakes and the Pacific Coast.

Cramer, Jarecki eastern manager, dies in Ohio

William H. Cramer, eastern division manager of Jarecki Manufacturing Company, died June 23 from a heart attack. He was 65 years old. He was stricken while in Newark, Ohio, on business.

In the newspaper business in the East for several years, Cramer had been identified with the oil business for the past 30 years, and with the Jarecki Manufacturing Company for the past 27 years.

EASTERN FIELDS

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
OHIO		
COSHOCTON COUNTY—		
Kundtz-Hulse, Inc., J. W. Mosholder 2	25	3090
GUERNSEY COUNTY—		
M. J. Purdy, Joel Carter 3	¶	1720
John Bindas, Laura Laughlin 1	*	1348
MEIGS COUNTY—		
Meigs Developing Co., M. Watson Heirs 1	¶	2167
A. H. Bengel, Cora Ater & Co. 2	*	905
Vienne Drilling Co., A. Williams 1	*	2125
MONROE COUNTY—		
Stout & Shafer, Frank Sharkey 4	¶1/3	1697
MORGAN COUNTY—		
A. M. Hummel et al, A. M. Hummel 1	¼	202
MUSKINGUM COUNTY—		
Mid-East Gas Co., S. B. Bowman 4	¶4	4126
NOBLE COUNTY—		
C. W. Rich et al, V. H. Corwin 1	¶½	1413
George Robinson & Co., W. S. Atkinson 3	*	870
PERRY COUNTY—		
Kachelmacher Estate, E. P. Davis 1	100	3667
Allegheny Oil Co., T. & M. Monahan 16	3	1073
Daily Crude Oil Co., Robert Deaver 8	*	1163
STARK COUNTY—		
Ohio Fuel Gas Co., John Stockert 2	¶	4270
WASHINGTON COUNTY—		
Otto Heldman, Marion Esler 1	¶	1025
Ray Dewitt et al, Munn Fisher 3	3	850
W. W. Patterson, B. Francisco 1	*	590
H. H. Uhl et al, W. V. Torner 1	*	625
CUYAHOGA COUNTY—		
L. F. McGrath, Bradford et al 1	¶	2800
STARK COUNTY—		
Lyons & Co., E. D. Longenbaugh 1	¶1	4597
TUSCARAWAS COUNTY—		
East Ohio Gas Co., C. J. Fernsell 1	¶1¼	4345
George Jewell, Frank Helter 1		....
WEST VIRGINIA		
BROOKS COUNTY—		
Wheeling Steel Co., Wheeling Steel Co. 1	*	2040
CALHOUN COUNTY—		
Jeff Miller et al, Lona Wier 2	¶¾	2040
Dunn Mar O&G Co., P. A. Reip 1	*	1900
GILMER COUNTY—		
McCall Drlg. Co., Clarence Rader	¶1	1550
Massey & Jarvis, George Linn Heirs 2	¶1½	1260
MARION COUNTY—		
Owens Illinois Glass Co., R. Charles Brock 1	¶	2908
RITCHIE COUNTY—		
Southern Oil Co., M. L. Patterson 3	1¼	2218
PENNSYLVANIA		
ALLEGHENY COUNTY—		
Keil & Co., Grottinger Heirs 1	*	....
GREENE COUNTY—		
James N. Hull, John Sellers 1	¶	2135
WASHINGTON COUNTY—		
Union Gasoline & Oil Corp., H. L. Day 2	15	2875
Victor D. Behm et al, Lucy Smith 1	¶½	1910
KENTUCKY		
DAVIESS COUNTY—		
Sunflower O&G Co., Ollie Bean 1	15	1098
ESTILL COUNTY—		
Johnnie Sparks, Clay Alexander 13	15	....
South Penn Oil Co., J. M. Garrett 48	10	816
Petroleum Exploration Co., Sam Brinegar 15	1	....
FLOYD COUNTY—		
Warfield Natural Gas Co., John W. Harris 1	¶	3140
F. W. Newson 1	¶	3009
HANCOCK COUNTY—		
Taylor Bros., T. K. Taylor 2	¶	586
LAWRENCE COUNTY —		
Ashland Oil & Refining Co., Wheeler, Skaggs et al 3	10	840
LEE COUNTY—		
McGann & Garrison, Andrew Combs 1	25	1002
South Penn Oil Co., Flahaven Land Co. 93	25	1146
MAGOFFIN COUNTY—		
Morbald Development Co., Charles Wheeler 2	5	1020
MARTIN COUNTY—		
Warfield Natural Gas Co., J. R. Fairchild et al 1	¶10	1442
Nancy Cornette 1	¶1/3	3104

*Failures; †Junked; ¶Million cu. ft. gas.

H. N. BLAKESLEE, New York, director of the department of accident prevention for the American Petroleum Institute, presided at a recent meeting of oil company safety engineers at Dallas.

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MICHIGAN FIELDS

Market congestion slows new drilling

Mt. Pleasant, Mich.—Buckeye pool, Gladwin County, accounted for 18 out of 25 completions in Michigan for the week and the bulk of the new production. Based on initial hourly gauges ranging from 1 to 6 hours, three tests rated potentials over 1000 barrels. All were in proven or semi-proven districts. Two failures, however, were recorded on edge tests, to further outline the area. Unconformities found in development still leaves the area more or less open despite a number of outlying failures or small producers.

Twelve new permits indicated a decline in new drilling but at the same time showed an increase in wildcat activity. A depressed market with resulting proration of 150-barrel-per-well flat limitations have combined to curtail the wildcat development so far this year. Bulk of work is in Gladwin County.

Michigan legislature fails on petroleum legislation

Mt. Pleasant, Mich.—The 1937 session of the Michigan legislature ended without either of the two bills most vitally concerning the oil and gas industry becoming law.

An oil bill, closely patterned after the New Mexico act, was approved in the House. It would have delegated much greater powers than at present to the state supervisor of wells.

A natural gas bill, having as its major shift the lifting of powers from the utilities commission and placing power in the hands of the oil and gas division of the conservation commission or a similar agency, received a favorable vote in the Senate.

Independent association men talk in Michigan

Mt. Pleasant, Mich. — Russell R. Brown, legal counsel for the Independent Petroleum Association and Charles Van Vleck, the association's field manager, were the principal speakers in Midland, Mich., June 23, at a banquet of Michigan oil men sponsored by the Oil and Gas Association of Michigan. F. A. Calvert, Michigan association president, presided.

Brown emphasized the danger to the oil industry of the proposed elimination of the 27½ percent depletion allowance permitted now in the federal income tax.

Peoples Natural seeks approval of sale and purchase

Harrisburg.—Approval of the sale of oil and gas properties in Cross Creek and Jefferson townships, Washington County, by the Peoples Natural Gas Company to the Manufacturers Light & Heat Company for $40,650 is being sought from the Pennsylvania public utility commission.

In another petition, the Peoples Natural Gas Company seeks approval of the purchase of similar property in Penn and Hempfield townships, Westmoreland County, from the Greensboro Gas Company, Pittsburgh, for $26,220.

Start work on natural gas purification plant

Huntington, W. Va.—Construction of a natural gas purification plant in the Patrick Creek section near Wayne has been started by The Chartiers Oil Company, Pittsburgh. The project calls for construction of approximately three miles of line from wells to the plant which, when completed, will refine for marketing purposes natural gas taken from wells in the vicinity.

To drill wildcat in Oregon

Heppner, Ore.—A wildcat test will be drilled at Wells Springs, Morrow County, by C. E. Cole and Arthur S. Olson, both of Portland, organized as The Columbia Natural Gas Corporation. Favorable reports on the region have been given by Dr. F. M. Handy and Carl J. Schilling, geologists.

MICHIGAN

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
GLADWIN COUNTY—		
G. M. Obenauer, Early 1, sw se ne 25-17n-2w	*	4016
Sun, Ockerman 3, ne nw se 10-18n-1w	275	3653
Rabb 2, se se ne 10-18n-1w	2310	3637
Mammoth P. & R., Ockerman 4, ne se nw 11-18n-1w	2400	3630
Franklin Pet. Co., State A4, se ne ne 11-18n-1w	450	3630
G. W. Norton, Campbell 2, nw ne nw 12-18n-1w	*	3690
Wicklund Dev. Co., Campbell A1, sw nw nw 12-18n-1w	650	3630
State C3, ne sw nw 12-18n-1w	475	3631
Fortney Oil Co., Converse 1, nw sw ne 24-18n-1w	*	3714
Fletcher & Rathburn, Shumway 1, ne sw se 24-18n-1w	30	3607
Bell & Marks, Lincoln 2, se ne se 35-18n-1w	300	3589
Gordon Oil Co., Trego 1, ne se ne 35-18n-1w	160	3590
State A2, nw sw ne 36-18n-1w	500	3573
Clark & Johnson, McMahon 4, sw nw sw 36-18n-1w	1100	3570
Turner Pet. Co., McMahon 1, nw se sw 36-18n-1w	500	3573
E. S. Beaver, Upton 2, ne se nw 36-18n-1w	650	3574
Upton 3, se se nw 36-18n-1w	600	3570
Bell & Mark, McKimmey 1, ne se se 1-18n-1w	*	3677
GRATIOT COUNTY—		
Weller & Jones, Nickert 1, sw sw ne 32-10n-4w	*	3238
INGHAM COUNTY—		
National Mineral, Smith 1, nw ne se 9-4n-1w	*	2850
ISABELLA COUNTY—		
Schelling Oil, Varney 2, sw se sw 34-15n-3w	220	3555
KENT COUNTY—		
Michigan Pet. Co., Fletcher 1, sw sw sw 25-7n-10w	*	2497
MIDLAND COUNTY—		
Pure, Root E3, s½ nw nw 7-13n-1w	110	3441
OGEMAW COUNTY—		
M. J. Ingold, Stevenson 2, nw sw ne 24-22n-1e	40	2775
WAYNE COUNTY—		
Pontchartrain Pet. Co., Boynton 1, nw se ne 27-4s-8e	*	2566

*Failures; †Junked; ‡Million cu. ft. gas.

Important extensions made on Michigan pipe lines

Mt. Pleasant, Mich.—Two new 6-inch welded lines averaging approximately 33 miles each completed this spring and now in operation provide the pipe line outlet for the new Buckeye field in Gladwin County.

Pure Transportation Company and Simrall Pipe Line Corporation, the latter an affiliate of Michigan-Toledo Pipe Line Company, and Standard Oil Company of Ohio are the two companies operating in the new field to date.

Last year Simrall Pipe Line Corporation laid a 4-inch line from the original Oard discovery well in Section 25-18n-1w, Buckeye township southwest to the older Beaverton pool, approximately 9 miles. Production at that time was small and oil was moved from the Beaverton terminal via the Pere Marquette railroad.

When J. V. Wicklund Development Company's State 1 discovery was brought in for 1250 barrels initial late in December, 1936, 4 miles north of the Oard pool, both Simrall Pipe Line Corporation and Pure Transportation Company immediately moved to provide greater outlets. The latter also was operating at that time in the old Beaverton pool shipping by rail. A new 6-inch line was laid from the Buckeye area to Beaverton, 11 miles, and Simrall Pipe Line Corporation extended its system north 4 miles to handle the discovery well output.

Having removed the problem of handling the output immediately, Simrall Pipe Line Corporation started construction of 32 miles of 6-inch line from the Beaverton terminal south to Mt. Pleasant, where it was tied in to the Michigan-Toledo line.

Pure Transportation Company with railroad loading facilities for about 16,000 barrels out of both Beaverton and Winegars, did not start immediate construction but the fore part of April commenced work on 21 miles of 6-inch line from the Beaverton terminal south to the company's tank farm 15 miles east of Mt. Pleasant. This line was placed in operation the first week of May.

The two systems now in operation are capable of handling approximately 60,000 barrels of crude daily, but actually due to a bad market situation are handling less than 20,000 barrels daily combined.

Simrall Pipe Line Corporation has established a booster station near Coleman with 20,000 barrels storage midway between the Gladwin and Mt. Pleasant stations. Additional storage is available at the Mt. Pleasant station and at the Crystal and new Chelsa station (now under construction). The system provides facilities for delivery to Roosevelt Refining Company's plant at Mt. Pleasant and other intra-state markets by railroad and for through delivery to terminal at Toledo.

Pure Transportation Company's Buckeye line has equally advantageous outlets. It ties in at the Greendale tank farm with 400,000 barrels storage, ties in at the same point with the Michigan-Toledo line and has a 6-inch line to Bay City for shipment by lake tankers and railroad.

With both of the new lines built in the late winter and spring months, mud constituted the chief problem. Simrall Pipe Line Corporation handled its own construction.

Pure Transportation Company contracted the 20 miles from Beaverton to Shamrock Pipe Line Construction Company, organized by C. G. Sach Daniels, Pat Mask and Bud Summerville.

Boost line capacity

Mt. Pleasant, Mich.—Michigan-Toledo Pipe Line Corporation has started installation of boosters on its 170-mile Michigan to Toledo (Ohio) 8-inch line expected to increase the daily throughput from 16,000 barrels to 25,000 barrels daily.

New boosters will be set at Chelsea and two between Mt. Pleasant and the Buckeye terminal. Both the East Lansing and Riverdale stations will be doubled.

Construction scene on pipe line in Michigan

ALABAMA

CHOCTAW COUNTY—Joe Modisett et al's McCorvey 1, sw sw 20-9n-2w, arr deepen 200 ft.

GREENE COUNTY—Greene County Dev. Co.'s (formerly Willis & Payne) R. C. Lett 2, se nw 6-21n-2e, spd.

HOUSTON COUNTY — Rice O&G Co.'s Oakley Est. 2, se nw sw 9-3n-29e, move in heavier rig to deepen, td 4975 ft, Tuscaloosa.

MOBILE COUNTY — Grand Bayou O&G Co.'s J. A. Stafford 1, sw sw 24-7s-3w, lcn.

CALIFORNIA

FRESNO COUNTY

CANTUA CREEK—Western Gulf's Skelly Estate 1, 32-16-15, foundation.

KERN COUNTY

DEVIL'S DEN—Amerada Pet. Corp.'s Beer 4, 17-26-19, td 2670 ft, wocs 8⅝ in at 2640 ft. Den. Pet. Co.'s No. 1, 20-25-19, td 4276 ft, waiting on casing. Geo. Woodman's Baron 1, 24-25-18, sd 320 ft.

LERDO—Arkelo Pet. Co.'s No. 41, 23-28-26, td 10,050 ft, fsh dr pipe.

CARISSA PLAINS—Anchor Oil Co.'s No. 1, 31-31-22, grading roads. Eocene Oil Co.'s No. 1, 31-31-22, rig.

BENA—Bacal Oil Corp.'s No. 1, 5-30-30, sd 1790 ft. Cajalco Oil Co.'s Brown-Pallette 1, 9-30-30, dr gray sand 3390 ft.

ROUND MOUNTAIN—California Western Oil Co.'s Durnal 1, 4-28-29, rig; No. 2, 32-27-29, td 984 ft, abn. Patton-Baldwin Oil Co.'s No. 1, 32-28-29, td 2080 ft, top Vedder 2076 ft, abn. J. J. Tavis' No. 1, 4-29-29, rig.

KERN FRONT—C. C. M. Oil Co.'s Carter 1, 7-27-27, dr gray sand 3715 ft. Seskayden Oil Co.'s No. A-3, 17-28-27, td 2890 ft, testing.

WASCO—Continental Oil Co.'s K.C.L. A-2, 8-27-24, dr shale 1094 ft. Seaboard Oil-Tide Water Associated's K.C.L. C-1, 26-27-24, dr brown shale 9981 ft.

ROSEDALE—Continental Oil Co.'s K.C.L. B-1, 12-29-26, dr gray sand 9649 ft.

JASMINE—Doyle Pet. Corp.'s Quinn 1, 15-25-27, td 2956 ft, plug 2882 ft, sd.

EDISON—East Edison Oil Co.'s No. 1, 23-30-30, dr shale 1474 ft. Golden Bear Oil Co.'s Cohn 1, 12-30-29, dr shale 1314 ft.

PREMIER—General Pet. Corp.'s Umbsen 1, 36-27-26, rur.

GRAPEVINE—Hall Baker Co.'s No. 11-1, 14-10-19, td 2375 ft in shale, abn. Reserve Oil & Gas Co.'s No. 33-4, 33-11-19, dr hard shell 4866 ft. Wilshire Oil Co.'s Tejon 1, 5-10-19, td 4452 ft, wocs 13⅜ in at 700 ft. Ohio Oil Co.'s Title Ins. D-1, 21-11-19, dr gray sand 9434 ft.

NORTH KERN RIVER—Hub Oil Co.'s No. 1, 8-28-28, sd 3320 ft.

KERN RIVER—Italo Pet. Corp.'s Koshland 1, 19-28-28, dr shale and oil sand 1630 ft. Ray Luses' McNeil 1, 10-28-28, sd 830 ft.

SAN EMIDIO—Kern Leasing Co.'s No. 2, 14-10-23, td 220 ft, no report. Union Oil Co.'s Morrison 1, 31-11-22, dr shale 1184 ft.

STRAND—Ohio Oil Co.'s K.C.L. E-2, 6-30-26, dr gray sand 8485 ft.

TEN SECTION—Shell Oil Co.'s Canal 21-14, 14-30-25, td 8613 ft to set casing. Superior Oil Co.'s Union Oil Co.'s K.C.L. 8, 11-30-26, td 12,618 ft, perforating at 6680 ft, to test.

FRUITVALE—Shell Oil Co.'s Bellevue A-26-31, 31-29-27, dr sandy shale 5152 ft.

WEST MOUNTAIN VIEW — Sunset Oil Co.'s Sunset-Starr 1, 17-30-28, sd 6794 ft.

RIO BRAVO—Union Oil Co.'s Kernco 1-34, 34-28-25, dr brown shale 9296 ft.

MIDWAY SUNSET—Valley Oil Co.'s No. 1, 18-32-23, td 3175 ft, plug 2780 ft, abn.

McGUNDEN—Superior Oil Co. A. T. Jergins Trust's Crome Com. 2, 36-29-28, td 2794 ft, pumped 225 bbls 17 gravity oil, cut about 50 percent.

Miscellaneous

HUMBOLDT COUNTY—Texas Co.'s Eureka 2, 22-3-1, td 7708 ft, hole caving, co.

KINGS COUNTY—Birch-Royer Oil Co.'s Orr 1, 5-23-17, td 1460 ft, wocs 13⅜ in at 420 ft. Central Calif. Utilities Corp.'s Kettleman-Lakeview 3, 11-23-19, td 1202 ft, plug 1190 ft, sd. Ray Bisconer's No. 2, 11-24-20, formerly Dudley Kettleman Oil Corp., dr sandy shale 1400 ft. Dudley Ridge Dev. Co.'s No. 2, 24-23-23, dr shale 840 ft. Kettleman View Oil & Gas Co.'s No. 1, 9-22-19, sd 4787 ft. Glen C. Stone's Teeter 1, 25-20-20, dr shale 1290 ft. Tri-Counties Oil Co.'s Olsen 1, 10-23-22, sd 4300 ft.

MADERA COUNTY — Tide Water Associated's Gill 1, 27-12-15, lcn.

SAN JOAQUIN COUNTY — Standard's Woods Com. 1, 24-1-5, dr gray sand 5654 ft. Texas Co.'s Lawrence-Stephens 1, 8-1-6, dr sandy shale 3180 ft.

SOLANO COUNTY — Amerada Pet. Co.'s Marks 1, 24-4-2, td 450 ft, shut in; Marks 2, 22-4-2, td 4475 ft, shut in; Triguerio 1, 24-4-2, td 4422 ft, wocs 7 in at 4147 ft.

SUTTER COUNTY—Buttes Oilfields' No. 4, 2-25-1, td 5800 ft, fsh.

TULARE COUNTY — Amalgamated O&G Corp.'s A. O. G. 1, 29-24-24, foundation. E. P. Jenning's No. 1, 4-24-23, sd 2707 ft. Standard's Morris 1, 36-24-23, rig. L. F. Turner's Glase 1, 15-22-26, spud 6/20, dr.

YOLO COUNTY—Empire Oil & Gas Co.'s No. 1, 8-9-3, lcn. Standard's E. E. Hooper 1, 32-9-1, foundation.

MONTEREY COUNTY—Amil A. Anderson's Hillman 1, 15-24-14, td 1095 ft, trying to regain circulation. California Oils' No. 1, 33-23-15, td 3500 ft, to deepen. Shell's Branch 1, 34-24-10, td 8994 ft, plug 8676 ft, swabbing; Branch 2, td 8662 ft, plug 8045 ft, sd.

SAN LUIS OBISPO COUNTY—Burkholder Oil Corp.'s Clay 1, 14-10-26, sd 3252 ft. R. A. Foster's McKee 1, 2-32-23, td 5087 ft, plug 3950 ft, testing. A. O. Lewis' Pecho 1, 34-30-10, td 2750 ft, bailing. Temblor Oil Co.'s No. 1, 22-31-21, td 1715 ft, co to 1715 ft, showing gas. Oscar Willett's No. 1, 27-26-13, td 300 ft, sd, equipment removed.

SANTA BARBARA COUNTY—E. C. Arnold's Arnold-Apache 2, 8-8-33, dr blue shale 4600 ft. Hancock Oil Co.'s Los Alamos 2, 6-7-32, dr gray shale 2810 ft. Leora Oil Co.'s Fithian 1, 8-4-25, sd 1025 ft. Midwestern Oil Co.'s No. L-1, 28-4-27, td 2054 ft, running wall scraper. Nine Springs Oil Co.'s Brinkinhoff 1, 9-7-30, td 3300 ft, bailing mud and water. J. L. O'Donnell's No. 1, 21-10-34, lcn. 101 Oil Co.'s Hollister 1, 35-5-33, td 358 ft, to deepen. Pacific Western Oil Co.'s Hobbs 1, 21-10-34, dr in Franciscan formation at 4224 ft, top Monterey 3798 ft. S. E. D. Oil Co.'s No. 1, 27-10-34, dr shale 2000 ft. Southern Calif. Dr. Co.'s Houk 1, 9-9-33, (formerly W. D. Shaffer) td 5003 ft, redr at 4850 ft. Tide Water Associated's Leonis 1, 3-6-33, rig. United Western Oil Co.'s No. 1, 16-7-30, (formerly Murdock & Allen) grade. Valley Oil Co.'s Chief 1, 20-9-34, td 2315 ft, co. Vista Del Mar Oil Co.'s Williams 1, 16-4-26, dr shale 2024 ft.

SANTA CRUZ COUNTY—Elba Oil Co.'s Elba 1, 6-12-1, ready to spud.

VENTURA COUNTY—Continental Oil Co.'s Casitas 1, 7-3-23, td 7912 ft, fsh dr pipe. El Rio-Oils' No. 1, 6-1-21, sd 3024 ft, may dr deeper. Speik Oil Co.'s Speik 1, 35-5-19, dr shale and oil sand 2724 ft.

SOUTHERN CALIFORNIA

NEWHALL—Barnsdall Oil Co.'s Rancho S. F. 1, 26-4-17, td 6472 ft, flowing 150 bbls, 36.8 gravity oil; No. 2, spud 6/20, dr. Holbrook Pet. Co.'s Newhall Land 1, 28-4-16, dr shale streaks sand showing gas 5840 ft.

PICO CANYON—A. G. Burt's No. 1, 36-4-17, dr hard shale 1777 ft.

LYNWOOD—Calizoo Oil Co.'s Saulque 1, 9-3-13, dr sand and shale 4800 ft.

EAST TORRANCE—Carson Oil Co.'s No. 1, 31-4-13, rur.

NORTH LONG BEACH—Geo. L. Clayton's Clayton 1, 32-3-12, sd 4895 ft.

FOX HILLS—Country Club Oil Co.'s No. 1, 19-2-14, dr sand and shale 3084 ft.

ROSECRANS—Harmon-Fisher's Rosecrans 1, 19-3-13, rig.

HERMOSA BEACH—C. M. Henderson's No. 1, dr sand and shale 2850 ft.

DAVIDSON CITY—Hilldon Oil Co.'s Flood Control 1, 11-4-13, td 6105 ft, pumping 50 bbls 23 gravity oil, cut 10 percent; No. 2, 13-4-13, rig.

WALNUT—Julian & Criswell's Langstaff 1, 5-2-9, dr brown shale streaks sand 1830 ft.

HAWTHORNE—Lennox Pet. Corp.'s Lennox 1, 3-3-14, td 500 ft, wocs 12½ in on bottom.

PALOS VERDES—McClaren Bros. No. 1, 27-4-14, td 3970 ft, redr to 1870 ft, co.

MONTEREY PARK—Wales Pet. Co.'s Haig 1, 26-1-12, dr sand and shale 1680 ft, showing some gas.

ORANGE COUNTY—Wm. Alexander's No. 1, 22-3-9, foundation. Amalgamated Oil & Gas Co.'s Parr Com. 1, 22-3-9, lcn. Mesa Oil Co.'s Mesa 1, 29-6-10, td 7865 ft, plugged back to test upper showings. Richfield Cons. Oil Co.'s Todd 1, 22-3-9, td 1700 ft, wocs 10¾ in at 1680 ft. Signet Oil Co.'s Signet 1, 21-3-9, dr sand and shale 1604 ft. West American Oil Co.'s Irvine 1, 14-5-9, dr hard brown shale stks gray sand 4890 ft.

FLORIDA

LAKE COUNTY—Oil Dev. Co. of Fla.'s Gulf Expl. Co. 2, se se 17-24s-25e, pb and set csg, trying to test, old td 6126 ft.

NASSAU COUNTY—St. Marys River Oil Corp.'s Hilliard Turpentine Co. 1, nw nw se 19-4n-24e, elev 110 ft, dr hd lime 1954 ft.

KANSAS

BARBER COUNTY—Pryor & Lockhart's Gant 1, c se¼ 7-31s-13w, flo & test. Barbara Oil Co.'s Holmes 1-27, c nw nw 27-33s-13w, dr 4523 ft. Colonial Oil Co.'s J. W. Blunk Estate 1, ne ne ne 13-24s-14w, lcn abd. W. I. Southern's Davis 3, se se ne 24-34s-15w, dr 875 ft.

BARTON COUNTY—Republic Nat. Gas Co. and Continental's Moeder 1, ne ne sw 25-17s-13w, dr 2895 ft. Sam Murphy's Beck 1, ne ne ne 17-17s-12w, spd & sd. S. E. Bailey's Hammeke 1, ne ne sw 12-18s-12w, dr 3190 ft. Shell Pet. Corp.'s Schneider 1, c se¼ 12-16s-14w, sso 3285-90 ft. Stanolind O&G Co.'s Schartz 1, nw nw nw 33-19s-11w, dr 2692 ft. Helmerich & Payne et al's Sessler 1, sw sw se 29-20s-11w, brr. Hanna et al's Luce 1, sw sw sw 21-20s-13w, spd.

BUTLER COUNTY—Simpson Oil Co. et al's Dennis 1-A, ne ne sw 15-26s-6e, dr 1982 ft. Maurer & Saco Oil Co.'s Connell 1, ne ne sw 27-29s-5e, dr 1325 ft.

CHAUTAUQUA COUNTY — Robinson et al's Foster 1, sw sw sw 6-33s-12e, so & g 1780 ft, dr 1810 ft. C. L. Brosius et al's Garrett 1, nw sw nw 26-32s-11e, dr 843 ft. Buffington & Cohen's Hayes 1-A, se ne se 10-33s-13e, td 1808 ft, D & A.

COWLEY COUNTY—Blair, Continental & McKnab's Miller 1, ne nw sw 14-32s-5e, set 6-in csg 2955 ft, dr 3015 ft. McCoy, Amerada & Wentz's Anderson 1, se nw ne 34-34s-6e, dr 2610 ft. Tom Palmer et al's Ogroskey 1, se se nw 31-32s-5e, dr 2730 ft. Trees Oil Co.'s Hornbeck 1, nw nw nw 5-33s-4e, dr 1750 ft. Tulsa Oil Co. et al's Dillon 1, nw nw ne 28-34s-3e, td 3396 ft, D & A. Earl Wakefield's Powers 1, nw sw nw 8-32s-6e, dr 360 ft.

DECATUR COUNTY—Bruce et al's Newbold 1, c ne sw 34-2s-28w, lcn abd.

ELK COUNTY—Republic Nat. Co.'s Glasscock 1, se ne sw 19-31s-11e, co 2012 ft. G. T. Berry's Zimmerman 1, sw ne se 15-30s-10e, td 2031 ft, D & A. Tyrrell's Sellars 1, se se se 11-31s-9e, est flo 10 bbls oil. Morgan et al's Cook 1, nw nw nw 29-30s-12e, dr 563 ft.

ELLIS COUNTY—Empire's Samuelson 1, ne ne ne 31-11s-16w, woc. Billings' Smith 1, se se nw 14-12s-16w, td 3369 ft, swb 6 bbls oil per hr, 12 hrs. Earl Wakefield et al's Burnett

ABBREVIATIONS

The following abbreviations, signs, etc., are used in completions and wildcat reports in THE OIL WEEKLY.

*—*dry hole abandoned well.*	owdd—*old well drilling deeper.*
‡—*salt water (completions).*	owpb—*old well plugging back.*
†—*junked and abandoned.*	pb—*plugged back or plugging back.*
¶—*million feet of gas.*	r—*reaming.*
abd—*abandoned.*	rog—*rig on the ground.*
bbls—*barrels.*	rur—*rigging up rotary tools.*
br—*building rig.*	rust—*rigging up standard tools.*
b.s.—*basic sediment.*	sd—*shut down.*
csg—*casing.*	sdtr—*sidetracking.*
co—*cleaning out.*	sg—*show gas.*
dd—*drilling deeper.*	si—*shut in.*
dk—*derrick.*	so—*show oil.*
dr—*drilling.*	so&g—*show oil and gas.*
fsg—*fishing.*	spd—*spudding.*
ft—*feet.*	sr—*straight reaming.*
hfw—*hole full of water.*	sw—*salt water.*
in—*inches.*	td—*total depth.*
lcn—*location.*	ur—*underreaming.*
m—*milling.*	wih—*water in the hole.*
mim—*moving in materials.*	wo—*workover.*
mit—*moving in tools.*	wocs—*waiting on cement to set.*
mot—*milling on tools.*	wosr—*waiting on standard rig.*
n, s, e, w—*north, south, east, west.*	
oih—*oil in hole.*	

1, nw nw ne 1-11s-18w, dr 1380 ft. Austin Drlg. Co.'s Karlin 1, nw nw nw 13-12s-18w, ru. Winkler & Koch's Jensen 1, sw sw ne 3-13s-18w, mi rot, sd. Muth's Penny 1, nw nw ne se 29-14s-18w, sd 315 ft. Vickers et al's Parker 1, c n½ ne nw 35-11s-18w, sd 390 ft. Empire O&R Co.'s Hall 1, ne ne ne 14-11s-17w, rur. Lario O&G Co.'s Bell 1, nw nw ne 8-12s-18w, mim.

GREENWOOD COUNTY—Ward McGinnis et al's Henley Estate 1, sw sw sw 25-25s-9e, hfw 2234 ft. Western Kan O&R Co.'s Taylor 1, se se sw 6-27s-12e, fsg 500 ft.

HAMILTON COUNTY—Barnsdall Oil Co. et al's Porter 1, sw sw ne 30-25s-41w, fsg 4390 ft.

HARPER COUNTY—Magnolia Pet. Co.'s Arch Freeman 1, se nw sw 3-31s-6w, set 15-in csg 316 ft, woc.

HARVEY COUNTY—Simpson & Noble et al's Pierce 1, sw se ne 25-22s-2w, dr 2660 ft. Bell O&G Co. et al's Austin 1, se ne ne 28-23s-1e, rur.

KEARNEY COUNTY—J. L. Murphy's Masonic Home 1, c nw¼ 1-26s-36w, fsg 519 ft.

KIOWA COUNTY—Stanolind & Amerada's Pyle, Jr., 1, c nw ne 8-29s-16w, rur.

McPHERSON COUNTY — Bradley Bros., Barnholt 1, sw sw se 30-20s-5w, ur 6-in csg 3260 ft. Smith et al's Larson 1, nw nw sw 35-18s-5w, ur 8-in csg 2896 ft. C. E. Ash Drlg. Co.'s Broman 1, ne ne nw 19-17s-4w, ru. Fred C. Frank et al's Doles 1, se nw ne 12-19s-1w, co 1403 ft. Wamhoff et al's Nuse 1, se se sw 18-18s-4w, td 672 ft, skid 12 ft east, spud 91 ft. Tom Palmer et al's Regier 1, se ne nw 13-21s-1w, td 3438 ft, D & A.

MITCHELL COUNTY—Geo. Seidhoff et al's Greiss 1, sw sw se 16-8s-10w, ur 6-in csg 3502 ft.

NESS COUNTY—Newton Dev. Co. et al's Tenny 1, nw nw se 19-18s-25w, refill 800 to 2100 ft, 14 hrs, no inc. in oil. Jones & Lane's Page Milling Co. 1, se se nw 36-18s-26w, spd.

PAWNEE COUNTY—Simpson Oil Co. et al's Hewson 1, se se sw 13-21s-17w, dr 3422 ft.

PRATT COUNTY — Atlantic, Empire & Skelly's Runyon 1, sw nw ne 11-27s-13w, dr cem.

RENO COUNTY—Carter, Continental & Empire's Bontrager 1, C-54, c e½ ne ne 26-24s-5w, dr 2474 ft. Sam Schneider et al's Kroecker 1, ne ne ne 12-22s-5w, mim.

RICE COUNTY—Fred Phillips et al's Hubenett 1, sw ne sw 23-20s-8w, set 5-in csg 3334 ft, woc. Union O&R Co. et al's Baker 1, sw sw ne 33-20s-6w, td 3855 ft, D & A. Comanche Oil Co.'s Cramm 1, sw sw se 15-19s-9w, testing. Hipple et al's Wernett 1, ne ne nw 11-20s-6w, dr 3035 ft. Skiles et al's Helmer 1, nw nw ne 7-19s-8w, dr 3040 ft. Witt et al's Fair 1, ne se se 4-22s-8w, fsg 2345 ft. Skiles et al's Campbell 1, se se ne 28-19s-9w, ru. H. V. Holland et al's Brothers 1, se se se 12-21s-7w, dr 1050 ft. Gillespie et al's Strong 1, ne ne nw 9-18s-8w, ru. Bell O&G Co. & Shell Pet. Corp.'s Wilkens 1, nw nw ne 23-21s-9w, circ 3350 ft. John Hanna et al's Marshall 1, ne nw nw 30-18s-8w, spd.

ROOKS COUNTY—Brunson Drlg. Co. et al's Casey 1, se se ne 22-9s-16w, dr 3647 ft. S. C. Hoel et al's Ives 1, sw sw ne 11-7s-18w, dr 2675 ft. W. W. Kiskadden et al's Ham 1, sw sw nw 25-7s-19w, rig. Graham et al's Fike 1, sw sw sw 9-9s-17w, sd.

RUSH COUNTY—S. A. Murphy et al's Roth 1, nw nw sw 21-16s-18w, dr 3033 ft. Duee & Brouk's Lebsack 1, se se ne 13-16s-16w, ur 6-in csg. Westgate-Greenland Oil Co. et al's Greenwalt 1, nw nw ne 19-19s-16w, td 4017 ft, pb to 3777 ft. Carter Oil Co. et al's Prosch 1, cel n½ se 21-18s-16w, sdo. Wakefield et al's Zimmerman 1, se se sw 7-16s-18w, lcn. Crawford et al's Jones 1, nw nw nw 35-17s-16w, rot rig.

RUSSELL COUNTY—Goldstein & Vernon O&G Co.'s Steinert Estate 1, ne se sw 34-15s-15w, sd 2835 ft. Aylward et al's Jones 1, se se nw 22-14s-13w, hfw 3230 ft. Billings et al's Boxberger 1, ne ne se 21-14s-14w, woc 3055 ft. H. C. Eisenhour et al's Krouse 1, se se nw 18-13s-12w, spd & sd.

SCOTT COUNTY—Olson Drlg. Co. et al's Nolan 1, nw nw ne 13-19s-33w, fsg 4777 ft.

SEDGWICK COUNTY—Roxanna Drlg. Co. et al's Woodman 1, sw nw sw 26-26s-1w, sd 2469 ft. E. B. Shawver's Furman 1, sw ne se 24-29s-3w, set 8-in csg 2860 ft. Union O&R et al's Howell 1, sw sw sw 6-29s-1e, ru. Ryan Consolidated et al's Williams 1, nw nw se 17-25s-2w, dr 2650 ft.

STAFFORD COUNTY — Rosespring Drlg. Co. et al's Gray 1, nw nw nw 11-24s-13w, dr 3760 ft. Atlantic O&R Co.'s Kachelman 1, se nw nw 13-25s-14w, dr 4333 ft.

SUMNER COUNTY—The Texas Co.'s Harper 1, ne sw se 9-30s-3w, td 4385 ft. D & A. Glimac Oil Co. et al's Proud 1, sw se se 33-30s-1w, dr 4018 ft. W. M. McKnab's Blair 1, sw sw sw 7-30s-1e, ru. Faulkner et al's Nevitt 1, ne nw ne 36-32s-6e, P 2½ bbls oil & 2½ bbls water per hr. Burton's Springate 1, ne ne sw 30-33s-2e, sd 91 ft. National Ref. Co.'s Schwantes 1, nw sw ne 16-32s-3e, lcn. Douglas & Gear's Strickler 1, sw nw ne 30-32s-1w, rot rig.

TREGO COUNTY—W. I. Southern's Latimer 1, nw nw se 19-15s-22w, co 4051 ft. Turner et al's Rogers 1, c sw¼ 3-15s-23w, set 10-in csg 245 ft, woc. F. L. Thorn et al's Dix 1, se se sw 31-14s-24w, dr 560 ft.

WOODSON COUNTY — Morris et al's Koening 1, se se nw 35-24s-15e, dr 1050 ft. Fred Rapp's Houghland 1, nw nw se 2-25s-15e, dr 600 ft. B & B Oil Co.'s Lockard 1, nw nw ne 2-26s-13e, dr 650 ft.

ARKANSAS

ASHLEY COUNTY — Phillips Pet. Co.'s Stillions Lbr. Co. 1, s½ sw nw 18-17-9, rog.

CLEVELAND COUNTY—Texas Canadian Dev. Co.'s I. E. Moore Est. 1, ne ne 22-9-10, dr 3530 ft shale.

COLUMBIA COUNTY—Robt. Keen's Runyon 1, 1-16-21, rur.

CRITTENDEN COUNTY — Stanley Oil Corp.'s Nanner 1, 18-8-9, lcn.

DALLAS COUNTY—J. C. Voyles et al's Sorrells 1, se se sw 35-10-16, dry abnd 1672 ft.

HEMPSTEAD COUNTY—Easton, May & Murdock's LaGrone 1, ne ne 5-12-26, woc 131 ft.

HOWARD COUNTY—Boettcher O&G Co.'s State Life 1, nw nw 28-11-27, woc surf csg.

LA FAYETTE COUNTY—Nivla Oil Corp.'s DeLay 1, nw sw se 19-15-24, dry abn, td 4503 ft.

LINCOLN COUNTY—Fitzwater et al's V. Bowens 1, nw sw ne 26-9-6, 10-in csg 20 ft.

LONOKE COUNTY—Frank Silver's Chambers 2, 17-2-7, dr 1410 ft.

MADISON COUNTY—J. E. & Jno. Hardy's Hamlin 1, sw nw se 8-16n-26w, mim.

MILLER COUNTY—W. L. McClanahan's Capps 1, ne sw 11-20-28, elev 284 ft, top first anhydrite 5270 ft, 7-in csg 6016 ft, tested with acid, flowed 607 bbls oil in 24 hours, td 6113 ft. E. H. Moore, Inc.'s Dale 2, 24-15-26, elev 250 ft, top Young 4320 ft, top Travis Peak 4654 ft, 8⅝ in csg 5655 ft, missed drill stem test at 7310 ft, arr deepen. Standard of La.'s Sarah Harvey 1, sw sw 33-16-25, dr 5484 ft.

NEVADA COUNTY — Benedum & Trees Oil Co.'s Groves 1, se nw 10-14-20, Big lime 5144-5394 ft, top salt 5510 ft, pb to 2186 ft to perf at Tokio, old td 6147 ft. Stewart et al's Walters 1, nw ne 1-14-20, owdd, td 2313 ft. Bruce Wallace's Wm. Haynie 3, se nw 6-14-20, sw 2310-2400 ft, pb to 1166 ft, 7-in csg 1147 ft, woc.

OUACHITA COUNTY — Copenhaver Oil Corp.'s Evans 1, ne sw 20-11-19, woc 10-in 60 ft. H. H. Taylor's McCree 1, dry abn 3004 ft. J. D. Reynolds' Ft. Smith Lbr. Co. 1, 27-11-17, sw sand 1190-1220 ft, dd.

ST. FRANCIS COUNTY—Manning & Martin's Gregg 1, sw nw 20-5n-5e, rur.

UNION COUNTY—Alice Sidney Oil Co.'s Powledge 1, sw se 7-18-17, dr 5487 ft. Morgan 2, dr 3410 ft. Jones et al's Murphy A-1, ne ne 19-18-17, dr 4190 ft; Murphy B-1, se ne 13-18-18, spd dr 1500 ft. Lion's Edna Morgan A-2, 18-18-17, dr 3480 ft; Edna Morgan A-3, dr 2360 ft; Edna Morgan B-2, dr 4390 ft. Marine Oil Co.'s Fee 1, 18-18-17, dr 3410 ft. Phillips Pet. Co.'s T. P. Marks 1, 18-18-17, dr 5395 ft; Justiss 1, dr 4970 ft; Rosen 1, dr 1340 ft.

NORTH LOUISIANA

BIENVILLE PARISH—DeSoto O&G Co.'s Wm. Ashley 1, sw se 15-16n-10w, 10¾ in csg 2109 ft, dr 5198 ft; Wm. Ashley 2, 15-16n-10w, lcn. Hunt & Seaboard's Good Pine 1, se se 30-14n-5w, top chalk 2377 ft, top Blossom 2822 ft, dr 6135 ft, shale and anhydrite. Lide, Greer et al's Davis Lbr. Co. 2, w½ w½ 12-16n-5w, dr 3460 ft.

CADDO PARISH—W. J. Hunter et al's N. B. Stoer 1, 10-15n-15w, set csg on bottom at 6012 ft, perf csg 5990-6012 ft, tested dry, dd. R. W. Norton's Payne 1, se se 27-23n-16w, coring 11,406 ft. Prairie River Synd's Hutchinson 1, 15-15n-12w, dr 8040 ft. Fallon Oil Co.'s Cupples 1, 24-16n13w, ran 5¾ in csg, arr perf & test old td 5675 ft.

CLAIBORNE PARISH—J. R. Bevill et al's Alex Edmonds 1, ne ne 16-20n-5w, dr 5051 ft. J. B. Bond's Burgess 1, 3-20n-5w, arr acidize td 5800 ft. United Gas et al's Caskey 1, 7-19n-5w, cemtd 5¾ in csg 5637 ft, td 5702 ft, woc.

DE SOTO PARISH—Grogan Oil Co. et al's Ramsey A-1, se nw 36-11n-11w, tested 22 joints oil 2961 ft, woc 7 in csg. Pearl Oil Corp.'s Joyner 1, 28-11n-12w, dr 4220 ft. A. D. Robinson's Allison 1, 17-14n-13w, spd woc 16 in csg 63 ft.

FRANKLIN PARISH—Jensen et al's Grayson 1, c ne 36-12n-6e, top Cockfield 575 ft, claim so, setting csg td 1811 ft (Cane River).

LINCOLN PARISH—G. E. Burford et al's Hanna 1, w½ se 34-18n-4w, rur. H. D. Easton & Belmont Quadrangle Drlg. Co.'s G. W. Dye 1, ne ne 21-19n-4w, coring 5631 ft, oolitic lime. E. T. Oakes, Easton et al's R. L. Sanderson 1, 30-18n-1w, dk. Glassell & Glassell's A. P. Gray 1, 16-20n-3w, top Travis Peak 5313 ft, dry abn td 5620 ft.

MOREHOUSE PARISH—Rondeau et al's Clarke 1, 10-20n-7e, wodd 3755 ft.

NATCHITOCHES PARISH—Jack Lent et al's Locke 1, 26-9n-9w, sd 2962 ft. Roy Raines et al's Allen 1, 22-9n-10w, woc 220 ft.

RAPIDES PARISH—F. W. Martin's Hill 1, 24-5n-4w, fsg 580 ft. R. D. Webb's Brasher 1, 22-4n-2w, sd 5255 ft.

RED RIVER PARISH—Whitehurst & Glassell's LeLong 1, 25-12n-11w, rur.

SABINE PARISH—Deep Rock Oil Co. et al's Whitney Corp. 1, 8-9n-13w, top Travis Peak 6525 ft, dr 6548 ft, A. C. Scott et al's Bowman-Hicks 1, 23-9n-12w, wosr, td 3088 ft. E. Howard's Sabine Lbr. Co. 1, ne nw 24-9n-12w, dk.

TENSAS PARISH—Ark. La. Gas Co.'s Hardwood Timber Co. 1, 8-11n-10e, dr 1350 ft. Jones, Sherrouse & Snyder's Chicago Mill & Lbr. Co. 1, 30-12n-10e, wodd 798 ft.

WEBSTER PARISH—Magnolia's D. G. Cox 2, 22-21n-10w, dr 8062 ft. Ira Cox 6, 23-21n-10w, dr 6597 ft. G. W. Cole 2, 27-21n-10w, dr 7115 ft. Ohio's R. M. Coyle 2, 22-21n-10w, testing, td 8503 ft. S. P. D. Coyle 1, 23-21n-10w, testing td 8452 ft. Standard of La.'s E. L. Stewart 1, 32-21n-10w, dr 7620 ft.

SOUTH LOUISIANA

ACADIA PARISH—Humble's Federal Land Bank 1, North Crowley prospect, 34-8s-1e, coring sand 8187 ft. John Mayo et al's Bank of Commerce 1, e of Tepetate field, 19-7s-1e, csg collapsed 860 ft, td 7350 ft.

CAMERON PARISH—Humble's Bell Hanszen 1, Hanszen prospect, 5-22s-6w, dr hard sand 8006 ft. Pure's State Mallard Bay 2, Mallard Bay prospect, 14-13s-3w, driving piling. Superior's State Gulf of Mexico 1, in Gulf of Mexico, 4-15s-8w, driving piling.

EAST BATON ROUGE PARISH—Louisiana Crusader Oil Co.'s State 2, University Block, 65-7s-1w, dr shale 6500 ft. Cavalier Oil Co.'s Elliott 1, n of Hope Villa, 3-8s-2w, repairing dk, 6115 ft.

EVANGELINE PARISH — Continental's Tate 1, Villa Platte area, 44-3s-2e, dr shale 2406 ft.

IBERIA PARISH—Jefferson Lake's Lake Peigneur 414, Lake Peigneur prospect, 12s-5e, coring shale with an odor of oil 6838 ft.

JEFFERSON DAVIS PARISH—Louisiana Crusader Oil Co.'s Langley 1, Fenton area, 36-7s-5w, preparing to perforate casing 9045 ft. Stanolind's Calcasieu National Bank B-2, China prospect, 28-7s-3w, dr shale 8681 ft. Union Sulphur's T. R. S. Farms 1, South Roanoke area, 23-10s-4w, dr shale 7586 ft.

LAFOURCHE PARISH—Fohs Oil Co.'s State Long Lake 1, in Long Lake, 65-17s-19e, comp 400 bbls daily 9406 ft. Gulf's State 3, sw of Marchland, 36-23s-21e, driving piling.

PLAQUEMINES PARISH—Gulf's Quarantine Bay QQ 3, 36-23s-21e, driving piling. Tide Water's Manhatten Fruit Co. 3, Venice dome, no report.

ST. BERNARD PARISH—Gulf's Lake Lery 2, Lake Lery prospect, 28-14s-14e, dr shale 6570 ft. Southern Sulphur Co.'s State 2, in Lake Borgne, 38-14s-15e, dr shale 3438 ft.

ST. CHARLES PARISH—Amerada-Louisiana Land & Exploration Co.'s State 1, Black Prince Island prospect, 13-15s-20e, dr shale 7940 ft.

ST. LANDRY PARISH—Gulf's Haas Hirsch 1, Krotz Springs area, 12-6s-7e, dr shale 6290 ft.

ST. MARTIN PARISH—Texas Co.'s State

Virginia Kline directing surveys in North Dakota

Grand Forks.—Surveys to determine anticlines favorable for the accumulation of oil and gas have been started as a North Dakota geological survey project under the direction of Virginia Kline, until recently assistant geologist and paleontologist with two oil companies in Michigan. The work has been started northeast of Devils Lake, where two zones have been located—one about 700 feet above the Dakota sandstone and about 50 feet thick and the other about 275 feet above and about 175 feet thick.

3, Lake Mongouloi prospect, 14-10s-9e, sd 8208 ft.

ST. MARY PARISH—Texas Co.'s State Bateman Lake 1, Morgan City prospect, 21-16s-12e, dr shale 10,571 ft; same operator's State Horseshoe Bayou 1, on Horseshoe Bayou, 40-7s-9e, cleaning hole 6300 ft.

VERMILION PARISH — Continental's Brookshire 1, Abbeville area, 66-12s-3e, dr shale 7609 ft.

MICHIGAN

ALLEGAN COUNTY — Champion Dev.'s Siko 1, sec 35-2n-13w, lcn. Flannigan & Kenlet's Clair 1, sec 29-1n-13w, testing so 1356 ft.

ARENAC COUNTY—Gordon Oil Co.'s State B1, sec 2-19n-3e, dr 240 ft. Linaberry's McTaggart 1, sec 26-19n-3e, sd 1760 ft.

GLADWIN COUNTY—Harold J. Hand's Smart 1, c n½ ne nw, 29-17n-2e, lcn. Bell & Mark's (Union Oil Co.) Steel 1, sec 22-20n-1e, dr 1300 ft. Dibble Brothers' Kimble 1, sec 16-18n-1e, dr 1770 ft. W. H. Thoruby's Klizz 1, sec 28-18n-1e, lcn. D. E. Hughes' Cox 1, se se ne 12-19n-2w, lcn. C. B. McLaughlin's Simmons 1, sec 28-19n-2w, sd 270 ft. Dapar Oil Co.'s Villeneuve 1, sec 11-20n-2w, mim.

GRATIOT COUNTY—Sam Siegel's Kerr 1, sec 36-10n-1w, sd 2250 ft. Carter Oil Co.'s Hirschman 1, sec 13-10n-3w, rig. H. B. Cowdry's DeVuyst 1, sec 11-10n-2w, sg 860 ft, 6-in csg 1151 ft. Gulf Refining Co.'s Lyons 1, sec 26-9n-2w, 5-in csg 2850 ft.

SAGINAW COUNTY—Mid West Pet. Co.'s Shields 1, sec 5-11n-2e, testing 2136 ft. Darke Brothers' Hart 1, sec 11-11n-3e, dr 2500 ft. Doran & Hillard's Debs 1, sec 33-11n-1e, sd 900 ft.

MISCELLANEOUS COUNTIES: Cass—L. T. Barber's Beebe 1, 3-5s-15w, sd 1500 ft. Cheboygan—Bert Francis' Campbell 1, 9-34n-1w, dr 1600 ft. Clare—Pure Oil Co.'s Apel 1, 31-19n-5w, rig. Crawford—Dome Oil Co.'s Fee 1, 33-35n-4w, lcn. Emmet—Cheboygan Oil Co.'s Barney 1, 12-35n-4w, dr 170 ft. Iosco—Pabst Oil Co.'s Montfort 1, 8-22n-6e, dr 2650 ft. Missaukee—Rex Oil Co.'s Meekoff 1, sec 30-21n-6w, fsg 3075 ft. Sanilac—T. Ferguson's Obee 1, 17-14n-14e, spd.

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BOLIVAR COUNTY—Phillips Pet. Co.'s Perthshire 1, 4620 ft s and 660 e nwc 2-24n-7w, spd. White & Jones' Ballou 1, ne ne 18-24n-7w, re-bldg dk, td 1680 ft.

GEORGE COUNTY—Cleve Love et al's J. J. Newman Lbr. Co. 1, c sw 9-1s-8w, dr sand (Wilcox) 3731 ft.

JONES COUNTY—Snow-Black Pet. Co.'s Cranford 1, s½ nw 29-7n-12w, sd 4095 ft.

LAMAR COUNTY—Sun Oil Co. et al's Mrs. K. Talley 3, 33-4n-15w, dr 4295 ft.

MADISON COUNTY—Sun Oil Co. et al's J. E. Wilson 1, se se 1-8n-2w, rur.

PIKE COUNTY — Acadian Prod. Corp.'s Bales 1, se nw 24-7n-2w, dk.

SUNFLOWER COUNTY — Phillips Pet. Co.'s Dockery 1, sw ne 27-22n-4w, rur.

WILKINSON COUNTY—Chas. Green et al's Taylor 1, c sw 4-3n-1e, rur. A. B. Taylor et al's Miss-Wis L&T Co. 1, sw sw 34-4n-1w, rur.

YALABOUSHA COUNTY — Skuna Dev. Co.'s Mrs. T. A. Turner 1, se sw ne 26-25n-6e, sd 300 ft.

OKLAHOMA

ALFALFA COUNTY—Olson Drlg. Co. et al's Acre 1, csw ne 14-24n-11w, fsg 4000 ft.

BECKHAM COUNTY—Mid-American Oil Co.'s Biscoe 1-A, sw sw sw 28-8n-22w, dr 1986 ft.

CADDO COUNTY—Clyde Becker et al's Pharris 1, cse se nw 24-6n-12w, dr 5050 ft.

CARTER COUNTY — Shell Pet. Corp.'s Smith 1, cnw se ne 30-5s-1e, dr 3910 ft.

CLEVELAND COUNTY — Hollenback's Stinson 1, nw nw ne 17-9n-2w, dp stuck at 7178 ft.

COMANCHE COUNTY — C. V. Morris' Young 1, se ne se 24-3n-10w, dr 1000 ft. Holliday's Kuntz 1-A, cse ne se 21-4n-11w, sd 2750 ft.

COTTON COUNTY—I. T. I. O. Co.'s Collins 1, ne ne ne 18-4s-10w, pits.

CREEK COUNTY—Continental Oil et al's Community 1, ne ne sw 7-15n-7e, lcn. M. W. Mosier et al's Holcomb 1, se sw ne 19-18n-8e, co 2963 ft, td.

GARFIELD COUNTY—Ohio Oil Co.'s State 1, sw sw sw 13-23n-2w, perf csg.

GARVIN COUNTY—Carter Oil Co.'s Potts 1, ce½ se nw 36-1n-3w, dr new hole at 532 ft. Nels Bufton et al's J. E. Burch 1, se se sw 3-3n-1w, br.

GRADY COUNTY—Gulf Oil Corp.'s Thomas 1, sw nw nw 14-4n-5w, dr 1670 ft.

GRANT COUNTY—Carter Oil Co. et al's Crisman 1, nw sw nw 16-25n-3w, dr 3058 ft. Carter et al's Kolarik 1, csl s½ sw 4-28n-5w, dr 4322 ft.

HASKELL COUNTY—Continental Oil Co.'s Anderson 1, sw se ne 33-8n-20e, td 5322 ft, lost circ.

HUGHES COUNTY — Chas. Thornton's Eason 1, ne ne nw 7-9n-11e, dr 3035 ft. E. H. Moore's Buck 1, nw sw sw 21-8n-10e, dr 2888 ft. Moroney & Healey's Field 1, cnw sw 11-9n-11e, hfw 2413 ft, run 8-in csg. The Texas Co.'s Cox 1, ne nw nw 23-9n-8e, rig. W. O. Allen's Barnard 1, sw sw sw 24-8n-8e, rur.

JACKSON COUNTY—Ace Gutowsky's Howard 1, sw sw nw 10-3n-19w, dr 883 ft. Ace Gutowsky's Lee 1, nw nw se 36-2n-19w, lcn. Ernest Lippert et al's Miller 1, nw nw nw 4-2n-18w, mach, c&p.

JOHNSTON COUNTY—Neff & Godfrey's Chapman 1, csw se sw 36-4s-4e, rur. Patton et al's McCrummens 1, sw sw ne 16-1s-6e, sd 1165 ft.

KAY COUNTY—Higdon et al's Nieman 1, ne nw ne 9-26n-3e, td 519 ft, i. p. 50,000 cf gas, comp.

KIOWA COUNTY—Kiowa Oil Corp.'s Finder 1, csw ne 4-6n-20w, dr 862 ft. Ace Gutowsky's Booker 1, nw nw nw 33-2n-18w, sd 440 ft.

LATIMER COUNTY—Clark Drlg. Co. et al's Wilson 1, cse se 15-5n-18e, sdo 6515 ft.

LINCOLN COUNTY—Ross Oil Co.'s Bailey 1, se se se 22-15n-6e, woc 2190 ft. Cimmaron Oil Corp.'s Frank Orner 1, csw se 31-17n-2e, sd for wtr at 1282 ft.

LOGAN COUNTY—Freeland et al's Woods 1, se se sw 27-17n-1e, rog. Shell et al's Waddle 1, sw se nw 36-15n-4w, br.

LOVE COUNTY—Sinclair Prairie's Stockton 1, se se sw 26-6s-2w, testing.

MAJOR COUNTY—Ed V. Parsons et al's Patzkowsky 1, cnw¼ 10-20n-11w, rig.

MARSHALL COUNTY—Stewart & Taylor's Chestnut 1, ne ne ne 23-8s-5e, sd 782 ft. Stewart & Taylor, Chestnut 2, ne ne ne 23-8s-5e, dr 410 ft.

McCURTAIN COUNTY—Wilcox O&G Co.'s No. 1, sw se sw 30-2s-27e, dr 560 ft.

MURRAY COUNTY—O. O. Owens' Fryer 1, ne se ne 34-1s-3e, plug off wtr.

NOBLE COUNTY—Lincoln Oil Co. et al's Neil 1-A, ne ne ne 15-23n-2w, fsg 4826 ft. Stanolind & Amerada's Johnson 1, nw nw se 4-20n-2w, dr by 5260 ft.

OKFUSKEE COUNTY—Riverland Oil Co.'s Board 1, ne nw se 10-13n-10e, dr 2100 ft. Burke-Greis' Rhea 1, sw sw se 14-10n-9e, rust.

OKLAHOMA COUNTY—Sunray Oil Co.'s Dickson 1, nw nw nw 17-11n-1e, td 6464 ft, to core.

OKMULGEE COUNTY—Lease Inv. Co.'s Reneau 1, sw se nw 4-13n-11e, td 3169 ft, p 200 bbls oil per day, comp.

OSAGE COUNTY—Mid-Co. Oil Corp.'s No. 1, se se sw 22-23n-6e, td 2992 ft, D&A. Norbla Oil Corp.'s No. 1, se se se 36-23n-6e, dr 265 ft.

PAWNEE COUNTY—Carter Oil Co.'s Wells 1, ce½ se nw 30-23n-5e, dr 1480 ft.

PAYNE COUNTY—H. F. Young's Jenkins 1, se ne se 4-17n-3e, dr 4595 ft.

PONTOTOC COUNTY—Southern Oil Co.'s Young 1, ne ne se 17-3n-7e, dr 750 ft. Roodhouse et al's Booth 1, se nw se 20-2n-6e, dp stuck at 2600 ft, shot off and wash over. Clark Drlg. Co. & Delaney's Richardson 1, se se sw 30-4n-8e, dr 3765 ft. Boettcher O&G Co.'s Gann 1, se nw ne 25-4n-7e, dr 2760 ft. Norbla Oil Co.'s Kennedy 1, se se ne 13-2n-5e, sd 810 ft. Union Dev. Co.'s Abbott 1, sw nw ne 34-3n-6e, dr 551 ft. W. E. Delaney et al's Payton 1, ne ne se 1-4n-7e, dr 2430 ft.

POTTAWATOMIE COUNTY—Stanolind & Amerada's Billington 1-B, sw se sw 32-9n-3e, bailing. Richborn Oil Co.'s Fidler 1, ne ne nw 9-5n-5e, sd. Atlantic Ref. Co.'s Dooley 1, se se sw 9-11n-5e, cor. Mid-Continent Pet. Corp. et al's Ne-Thah-Pea-Se 1, se se ne 24-11n-4e, dp stuck at 3700 ft.

PUSHMATAHA COUNTY—Erle Halliburton et al's Bogwell 1, sw ne ne 30-3s-15e, dr 3327 ft.

SEMINOLE COUNTY—Mid-Continent Pet. Corp.'s Schrupp 1, sw nw sw 24-5n-6e, dr 2980 ft.

STEPHENS COUNTY—Carter Oil Co. et al's Harley 1, c ne ne 24-2s-4w, cor 6371 ft. Wm. Angle et al's Sid Lang 1, sw sw ne 24-1n-7w, td 5027 ft, D & A. Coline Oil Co.'s Johnson 1, c sw se ne 1-2n-8w, sd for water, 6962 ft. Ed Parsons et al's Blake 1, c sw nw 22-2n-8w, dr 3326 ft. Helmerich & Payne's Graham 1, c sw sw ne 12-1n-5w, est flowing 10,000,000 to 15,000,000 cf gas & 250 bbls oil. Geo. L. Pace et al's Tah-su-dah 1, se nw sw 27-1s-9w, td 2707 ft, D & A.

TILLMAN COUNTY—I.T.I.O. Co. et al's Hatler 1, c sw ne 32-2s-17w, pumping. Cavens et al's Southerland 1, sw sw nw 35-4s-16w, ru & sd. Tom Walker's Bowman 1, sw sw nw 10-4s-17w, woc 20 ft.

WASHITA COUNTY — John Koberg's Harms 1, c nw nw ne 6-10n-16w, dr 610 ft.

SOUTH TEXAS

CORPUS CHRISTI DISTRICT

ARANSAS COUNTY—Barnsdall Oil Co.'s Kate Edwards 1-A, Wm. Lewis sur, drilling 8895 ft.

BEE COUNTY—J. R. Dougherty's R. T. Hicks 2, Holman George sur, dry and abnd, 5009 ft.

BROOKS COUNTY—Standard Oil Co. of Texas' Mestina Oil & Gas Co. 1, R. G. Salinas sur, coring 6297 ft; Mestina Oil & Gas Co. 8, Tr. 5, La Mestina y Gonzalena gr, wait on rig.

CAMERON COUNTY—Ruez-Morton, Inc.'s United Land Irr. Co. 1, blk 402, El Jardin

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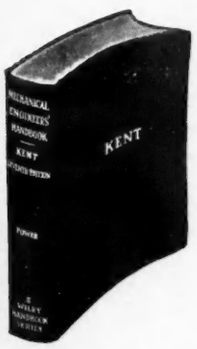

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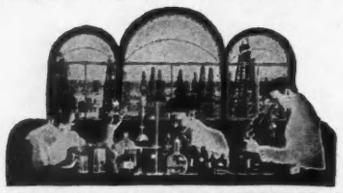

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sub, dr 5140 ft. Saxet Prod. Co. and A. W. Phillips' Port Isabel et al 1, sh 29, Espiritu Santo gr, lcn temp. abnd. Rowan & Hope will not drill. Stapper Pet. Corp.'s Port Isabell Irr. Co. 1, blk 17, Port Isabell Irr. Co., sd, likely will abnd, td 8000 ft.

GOLIAD COUNTY—Dirks Brothers' Dr. G. W. Allen 1-A, Obid Marshall sur, dr plugs 4550 ft. Goliad Oil Co.'s S. E. Cole 1-A, lot 33, range 4, drilling 2975 ft.

JACKSON COUNTY—Cockburn Oil & T. Hargrove's Santa Theresa Farms 1, I&GN sur, dr 6195 ft. George J. Greer et al's J. R. Davis 1, D. H. Hoffman sur, resume dr 4928 ft.

JIM WELLS COUNTY—John F. Camp Dr. Co.'s W. E. Pope 2-B, sec 13, Richard King Farm Lots, dr 4935 ft. Magnolia Pet. Co. et al's A. A. Seeligson 7, Los Jaboncillos sur, dr stem test 5614-24 ft, working pres 900 lbs, 60 ft oily mud and little distillate, core ahead, td 5640 ft. Tseslemis and Reese's Martha Earhart 1, John Suggs sur, will recement and test again, td 4005 ft. Wellington Oil Co.'s Clara Driscoll Sevier 1, La Anima Solo gr, ab 545, dr upper sands, hrd and dry 6320 ft.

KLEBERG COUNTY—John F. Camp Prod. Co.'s C. Phillip Wardner, Trs., 3, changed from 2, Paco Ancho de Arriba gr, wo rig.

LIVE OAK COUNTY—W. M. Brown's W. Moozygamba 1, blk A, George West subd, lcn. Loma Oil Co.'s L. Jacob Corp. 8-B, GH&H sur, dr 625 ft; Schwartz 1, Mark Killely sur, dr 900 ft.

NUECES COUNTY—Mills Bennett Prod. Co.'s William Heuermann 1, C. Land sur 408, dr and core 6110 ft. J. K. Culton's I. M. Singer 1, lot 13, blk 39, Flour Bluff & Encinal Garden Tracts, core 6590 ft. Fain Gillock et al's Robt. Poenisch 1, lot 11, sec 32, Flour Bluff & Encinal Gardens Tr., lcn. W. L. Hinds' Lucy Rivers 1, sec 391, rec 2 joints of sw on dst 5668-86 ft, dr ahead, td 5686 ft. Seaboard Oil Corp.'s James P. Luby 1, sec 2, Luby subd, flowing 8 bph 5/32-in ch, tp 725 lbs, cp 950 lbs, perf 5048-50½ ft. Seaboard Oil Corp. of Delaware's J. O. Chapman et al 1-C, sec 111, Laureles Farm Tr., sp. Southern Minerals Corp.'s Richard King 1, sec 32, King Farm Lots, coring 7400 ft; H. G. Yakey 1, sec 38, King Ranch subd, dk. Taylor Pet. Co.'s J. V. Styles 1, blk 14, Rowsey subd, sec 18, I. Z. Bishop subd, dr 6913 ft. United Prod. Corp.'s W. H. Harvey 1, Garcia sur, Chapman subd, still testing 9002 ft.

REFUGIO COUNTY—J. V. Chew & O. V. McIntire's F. E. Kloessel 1, sec 11, will move in shortly. Edwin M. Jones' Ben Shelton 1, Refugio Town gr, dr 6100 ft. Randon Oil Co. and American Liberty Oil Co.'s J. Vincent 1, blk 9, Randon Oil Co. lse, set 12½ in sur csg at 1660 ft, with 350 sacks cement, td 1660 ft. United Prod. Co.'s J. J. O'Brien 12, Refugio Town Tracts, perf approx 7890-7910 ft, ran tubg, wshg in, td 9225 ft.

SAN PATRICIO COUNTY — Danrey Oil Co.'s Jean Davis 1-A, Wm. Boyd sur, dr 3700 ft. Eleanor Oil Co.'s J. F. Green Est. 1, T. T. Williamson sur, perf 6780-90 ft, tested sw some gas and little oil, recemtd and perf 6572-82 ft. Humble O&R Co.'s John S. McCampbell 1, R. Martinez sur, dr 5872 ft. Plymouth Oil Co.'s J. F. Odem 1-A, Archibald Herron sur, dr below 4000 ft. Wellington Oil Co.'s James F. Welder 1-B, Julian de la Garza gr, sec 6, Cubage & Miller subd, sp.

VICTORIA COUNTY—Magnolia Pet. Co.'s Mrs. Meta Beck 1, T&NO RR. No. 1, Ab 407, dr 890 ft. Transwestern Oil Co.'s A. M. McFaddin 3, J. Viarin sur, cored and running dst 6197-6231 ft, td 6231 ft.

WILLACY COUNTY — Shell Pet. Co.'s Yturria Land Co. 1, San Juan de Carritos gr, sh 64, cut oil dr stem to 7800 ft, cement back 7756 ft, test some oil, td 10,286 ft.

LAREDO DISTRICT

DUVAL COUNTY—Conservative Oil Co.'s DCRC (Sun) 1, sur 47, lcn. Government Wells Oil Co., Inc.'s H. A. Lundell 2, sec 140, sand 1518-28 ft, 1050 ft plo, 150 lbs ⅜ in ch, top and btm 11 min, set 7 in csg, waiting on cement, td 1528 ft. Hiawatha O&G Co.'s M. M. Miller 2, blk 24, Ball subd, dr 1945 ft; Southland Life Ins. Co. 3, Santos Flores gr, dr 3850 ft. King Dr. Co.'s Atlee Parr 1, San Andres gr, dr 5410 ft. Magnolia Pet. Co.'s F. Weil et al 1, sur 565, dr sticky shale, td 3612 ft. Navarro Oil Co.'s E. M. Rossi 1, sec 11, Santos Flores gr, coring 4735 ft. Penn-Palangana Oil Co. et al's C. K. Gravis 1, sec 254, dr wtr 4550 ft, wtr slowing operations. Standard Oil Co. of Kansas' Atlee Parr 1, San Andres gr, sand about 4688-4700 ft, showed possibilities on electric formation tester, testing regular sand 4721-44, lignite 4744-47 ft, td 4747 ft; Mabel Rossi 1, Santos Flores gr, blk 10, Sweden subd, sp. Trahan & Tuttle's J. C. Megerle 1, sur 245, still sd, td 1100 ft. W. H. Wollett and M. D. Masten's Bishop Cattle Co. 2, sur 74 ft, lcn temp abnd.

JIM HOGG COUNTY—Magnolia Pet. Co.'s Merchants Bank 43, sec 151, CB&NG RR sur, core 2170 ft.

McMULLEN COUNTY—Edwards & Zoch's Two Rivers Ranch 1, sec 60, Two Rivers Ranch, dr 650 ft. Harvey & Henderson's Nueces Land Livestock Co. 1, sec 105, still wor. W. L. Hinds' Douglas W. Rhodes 1, H. Nadler sur, dr 740 ft. Howell Oil Co.'s Kate Martin 1, D. Easterpri sur, sand appears to have good sat, woo, may run electric formation tester, td 2910 ft. W. P. Howell's B. C. Claunch 9, M. Hely sur, lcn. Edwin M. Jones' Harry Ezzell 5, H. M. Brewer sur No. 7, spudding. Edwin M. Jones' Harry Ezzell 6, sec 60, Ezzell Ranch sub, G. Q. Ragland sur, dr sur plugs. J. T. Lanier's E. R. Hagist 1, sur 481, still sd, td 450 ft. C. C. Shumway et al's Shiner Ranch 10, sec 51, dr 1325 ft.

STARR COUNTY — Calderoni-James-Follette's Francisco Rodriguez 1, sh 56, por 80, J. of Camargo, sd 150 ft. John H. Clopton et al's Dionicio Tijerina 4, blk 12, sh 14-C, por 80, J. of Camargo, D&A 1630 ft. Danrey Oil Co.'s Cayentano Ramos 2, sur 149, mir. Gilcrease Oil Co.'s De Castillo 1, por 77, lot 9, Walker subd, of sh, cemented csg top sand 776 ft, woc 5¼ in csg 776 ft. Henry Mode et al's Kelsey Bass 1, block 7, Kelsey Bass subd, por 86-87, por 87, reaming to dd, sw sand 2405-13 ft, td 2503 ft. K. E. Merren's Starr County Cattle Co. 1-A, por 89, Jefferies & Lambeth subd, showing heavy gas pres, lots gas and spraying about 1½ bph of distillate, td 5/32-in ch. Moss & Heard's S. B. Ricaby 4, por 83, temp abnd 1820 ft. Palmetto Oil Co.'s Quirino Vela 1, por 85, dr 1635 ft; Quirino Vela 2, lot 9, El Tangue subd, por 84 and 85, J. of Camargo, sp. The Texas Co.'s A. V. Guerra 6-A, Juris of Mier, por 67, dr 725 ft.

WEBB COUNTY—Bridwell Oil Co.'s S. Benavides 1, sec 691, cor 2810 ft. Eugene Garner, Jr.'s R. Saldivar 2, sur 657, sd 1000 ft. O. W. Killam's A. M. Bruni Est. 2, blk 83, Borrego gr, El Ranchito tr, lcn; D. G. Garcia 7, sur 786, ru. Lutex Oil Co.'s Lone Star Con. Co. 2-A, por 12, dr 2400 ft. J. W. Magee's E. Garcia 1, Henry James subd, ru, ready to resume dr, td 40 ft. Paul Meaders et al's Garcia & Villareal 1, sec 338, lcn. J. R. B. Moore's M. D. Slator 1, blk 74, Slator Ranch subdivision, Borrego gr, abnd 1502 ft. Howard Nessley's A. M. Bruni Est. 3, sur 449, lcn for Cole sand test. Perkins, Cullum & Achning's Louisa R. de Garza 1, sur 711, cor 2010 ft. Randon Oil Co.'s Joe C. Palmer 1, sur 474, not yet spudded.

WEBB COUNTY—Allison & Abrams' S. Vela 1, sur 259, dr 650 ft. Gilcrease Oil Co.'s Antonio Trevino 2, sec 8, blk 12, por. 2 and 3, sd 2000 ft. O. W. Killam's A. M. Bruni Est. 1, center blk 83, Killam subd, El Ranchito Pasture, dr 50 ft. Ray L. Martin's S. Vela 1, blk 44, sh 2, El Grullo gr, lcn; S. Vela 1, sh 4, blk 77, lcn. Eugene Mays' et al's Adela G. de Flores 1, blk 198, Dorothy subd, lcn. J. O. Sheffield's C. H. Buck 1, blk 15, J. O. Sheffield subd, sur 273, cor ahead 1975 ft. Starr Dev. Co.'s Paula V. de Garcia 1, blk 34, D. A. Douglas subd, Zorro Ranch, cor 1424 ft.

SAN ANTONIO DISTRICT

ATASCOSA COUNTY—Priest et al's Birdwell 1, tr 45, J. P. Gorman sur, sd 1725 ft. A. T. Crane et al's R. B. Watson 1, sur 71, A. C. Curver, stdg 2035 ft.

BEXAR COUNTY — American Gas Co.'s Oliver 5, M. F. Rodriguez sur, still reaming, td 3460 ft. Carter and Ingersoll's Louis Mann 1, Stephen Jett sur, still working on well, 1357 ft. Dewey et al's C. A. Weeber 1, Juan Montez sur, dr 175 ft. Edna May Oil Co.'s Mrs. C. N. Cassin 1, Fernando Rodriguez sur, lcn. L. K. Oil Co.'s William A. Russell 1, Fernando Rodriguez sur, sp & set 21 ft of 10 in sur csg.

BLANCO COUNTY—E. L. Nixon's H. Hohenberger 2, Adolph Jonas Sur. No. 723, td 1216 ft pulled 6⅝ in reaming will reset pipe.

CALDWELL COUNTY—Allbright et al's C. P. Smith 1, James Berry sur, dr 750 ft. B. C. Armstrong et al's Wilson Bell 1, n portion Luling townsite, prep to mi will start about 5th of July. R. T. Belcher's Mrs. G. Moody 1, Solomon Seal sur, drk. Fain Gillock's Mrs. J. P. Walker 1, A. Floyd sur, sd 20 ft. Richardson Pet. Co.'s J. M. Trammell 1, E. Berry sur, dr 2040 ft. Rosita Oil Co.'s Lockhart State Bank 1, John Roe sur, swabbing 2204 ft. Spokane Oklahoma O&G Co.'s K. Dougherty 1, J. Tyler sur, dr 1250 ft. Stapper Pet. Co.'s E. Martin 1, A. Floyd sur, comp 54 bpd on top, td 2557 ft. F. R. Williams' H. L. Rodenberg 1, James Berry sur, ru to pump show some oil, td 2010 ft.

DIMMITT COUNTY—Paul C. Teas & Mary-

PRODUCTION DEPARTMENT MANAGER— Wanted by progressive organization, a man experienced in acquiring undeveloped and producing leases, and supervising their development and production. Knowledge of Texas and Louisiana fields particularly desirable. State experience in detail, age, and salary in last position. All replies will be treated confidentially. Box No. 229, care The Oil Weekly, Houston, Texas.

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HOUSTON, TEXAS

land Oil Corp.'s S. E. McKnight 1, I. & G. N. sur, will start soon. Wilcox Oil and Gas Co.'s Light Ranch 1, I. & G. N. sur No. 527, dr 7540 ft.

EDWARDS COUNTY—Amon G. Carter et al's Frank J. Sweeten Ranch 1, dr 305 ft.

FRIO COUNTY—Amerada Pet. Co.'s Mrs. D. D. Harringan 1, blk 77, Salvador Flores sur No. 306, dr plugs 6410 ft. H. A. Pagenkopf and L. C. Jameson's Blackaller Est 1, James Gourley sur No. 765, dr 650 ft.

GONZALES COUNTY—Canoe Creek Oil Co.'s W. L. Bolts 1, W. A. Matthews sur, sd.

GUADALUPE COUNTY—R. T. Belcher's I. T. Fulcher 1, Robt. Smith sur, abnd 1895 ft. Kennedy & Crowley's Gus Jahns 1, Jose K. Davis sur, testing on pump. td 2507 ft. W. Scott Townsend's Tom Terrill 1, Jesus Cantu sur, dr 1965 ft.

HAYS COUNTY — Mallory - Holcomb & Nance's J. A. Hudenrich 1, W. Hemphill sur, btm chalk 450 ft, set 4 in at 650 ft, sd 650 ft. N. G. Williams' Frances Jennings 1, Venmonds sur, lcn.

LEE COUNTY—Eleoussa Oil Co.'s Ira Sanders 1, J. Von Roeder sur, sd 3675 ft.

MEDINA COUNTY — Frank A. Brown's Jack Bilhartz 1, J. Campbell sur, 1377 ft lime sd for csg. A. E. Brucks 1, John Ward sur, abnd 760 ft. C. J. Webster O&G Co.'s Wm. H. Weimers 1, Joseph Haley sur, wo water.

MILAM COUNTY — Kingdorr Exploration Co.'s J. C. White et al 1, Bynum Wickson sur, dr Austin chalk 2890 ft, td 2940 ft.

TRAVIS COUNTY—J. E. Jourdan's Dr. J. V. Siegmund 1, A. M. Leavy sur, dr 775 ft. R. M. Kyle's W D. Hunter 1, J. Burleson sur, still sd 228 ft.

WILSON COUNTY—R. C. Stanley's E. M. Hierholzer 2, R. Salina sur, recemented td 1031½ ft, woc.

EAST TEXAS BORDER COUNTIES

MARION COUNTY—Ark. La. Gas Co.'s C. C. Braden 1, Thos. Hansen sur, elev 211 ft, pb to 5970 ft, arr perf and test so in Gloyd; Allen Houston 1, A. de los Santos Coy sur, dr 5795 ft. The Hunter Co.'s Fonda 2, A. de los Santos Coy sur, arr set csg after logging saturation in Gloyd, td 6095 ft. Fohs Oil Co.'s Mary McReynolds 1, A. de los Santos Coy sur, dr 4150 ft. Mid-Continent Pet. Co.'s Sory 1, A. de los Santos Coy sur, dr 4390 ft. United's J. H. Hutchinson 1, A. de los Santos Coy sur, lcn moved 200 ft north, rur.

PANOLA COUNTY—Danciger O&R Co.'s J. W. Tatum 1, Alfred Bissell sur, spd and rur. Glassell & Glassell's Pierce & Chesbro 1, Julia Soape sur, dr coring 5866 ft, sandy oolitic lime. Magnolia Pet. Co.'s E. A. Hull 2, Thos. Applewhite sur, elev 222 ft, dr 6375 ft.

SHELBY COUNTY — Wm. Reditt et al's Pickering Lbr. Co. 1, Stephen English sur, elev 303 ft, top Blossom 2310 ft, est 5 mil ft gas after acidizing, si for gauge, td 4109 ft (Paluxy).

TEXAS GULF COAST

AUSTIN COUNTY — Cockburn & Hargrove's Bartay 1, w of Bellville, M. Steussy sur, dr shale 3725 ft.

BRAZORIA COUNTY — Pure's Slade 1, Peach Point prospect, S. F. Austin sur, circulating in heaving shale at 8025 ft.

COLORADO COUNTY — Coyle Concord's Powel 3-B, I&GN sur, sec 45, woc 609 ft.

FT. BEND COUNTY — Marlen Oil Co.'s Jurea 1, Needville prospect, H&TC sur, sec 26, abn 6523 ft. Research Oil Co.'s Moore 1, ne of Orchard, S. Kennedy sur, fsh 4610 ft. Schwab & Gem Oil Co.'s Arcola Sugar Co. 1, Arcola prospect, D. Fitzgerald sur, dr shale 4498 ft.

HARRIS COUNTY—Humble's Settegast 1, Friendswood area, Perry & Austin sur, coring sand showing oil at 5990 ft. Superior's Butler 1, Bammel area, J. Ehrhardt sur, dr shale 9309 ft.

JEFFERSON COUNTY—H. B. Hebert & S. Smith's Broussard Trust 1, Pine Island area, J. W. McGattey sur, sd 6290 ft.

MATAGORDA COUNTY — Continental's Hawkins 2, Sheppards Mott area, D. McCarthy sur, dr shale 5554 ft. Royal Oil Co.'s Ewing 1, Sugar Valley area, A. S. SoJourner sur, dr shale 8053 ft.

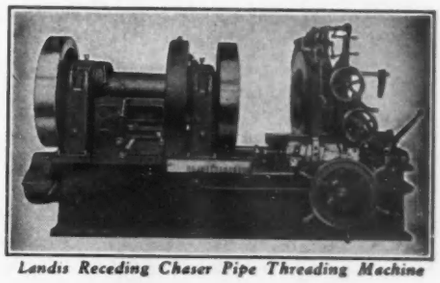
MONTGOMERY COUNTY—Texas Co.'s Crawford 1, Willis area, U. Springer sur, dr shale 3605 ft.

NEWTON COUNTY—Houston Oil & Republic Prod. Co.'s Sabine Tram 1, Bunker Hill area, H&TC sur No. 35, dk.

SAN JACINTO COUNTY—Cockburn et al's Whitten Estate 1, Keno area, Wm. West sur, fsh 5602 ft.

WASHINGTON COUNTY—K. D. Harr & R. Starr's Ellerman 1, W. Bridges sur, sd 290 ft.

D. S. MAIR
MACHINERY CORPORATION



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COMPREHENSIVE INDEX
of the
PUBLICATIONS OF
THE AMERICAN ASSOCIATION
of
PETROLEUM GEOLOGISTS
1917-1936
By
DAISY WINIFRED HEATH

A.A.P.G. PUBLICATIONS INDEXED
(20 Years of Geology of Oil and Gas)

The **Bulletin,** Volume I to Volume XX	1917-1936
Geology of Salt Dome Oil Fields (out of print)	1926
Theory of Continental Drift (out of print)	1928
Structure of Typical American Oil Fields, Volume I (out of print)	1929
Structure of Typical American Oil Fields, Volume II	1929
Stratigraphy of Plains of Southern Alberta	1931
Geology of California (out of print)	1933
Problems of Petroleum Geology	1934
Geology of Natural Gas	1935
Geology of the Tampico Region, Mexico	1936
Gulf Coast Oil Fields	1936
Structural Evolution of Southern California	1936

382 pp. free to members. Non-members, individuals, companies, and institutions may buy copies at $3.00, postpaid.

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Tulsa, Oklahoma, U.S.A.

NEW PRODUCTS FOR THE FIELD
Machinery • Tools • Catalogs • Books

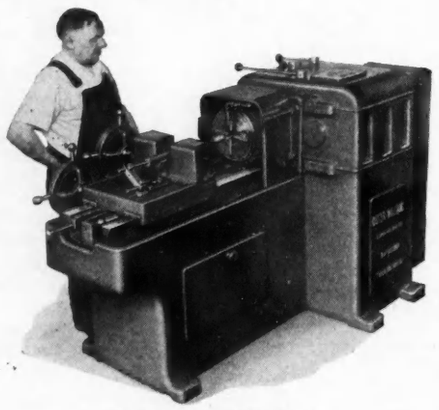
BOLT THREADING MACHINE
The Oster Manufacturing Company

The Oster Manufacturing Company, Cleveland, Ohio, recently announced the development of an improved No. 915 single spindle "Rapiduction" bolt threading machine.

Its regular bolt range covers all sizes from ⅜ to 1½-inch at spindle speeds ranging from 49 to 298 rpm.

A spindle bore of 2⅛ inches and a vise adaptable to many different types of work holders, gives the machine wide range for work of a special nature.

The machine is of a modern design. Timken bearings are used throughout and the die-head is made of the finest hardened and ground tool steel. All the dies are of high speed steel.



Oster Bolt Machine

The spindle is made of high-carbon steel forgings, heat-treated and ground.

The spindle is mounted on preloaded tapered roller bearings that are adjustable for long wear. Driving and change speed gears are chrome nickel steel, heat-treated and ground, and run in oil.

The headstock shaft is also made from high-carbon steel, heat-treated and ground, and is mounted in tapered bearings, automatically lubricated and adjustable for wear.

Semi-steel makes up the vise-carriage. The carriage is rigidly supported with both lateral and vertical adjustments for wear.

Guards cover all moving parts of the machine that might cause injury.

FAN-COOLED MOTORS
Wagner Electric Corporation

Wagner Electric Corporation, 6400 Plymouth Avenue, St. Louis, Mo., offers a newly improved Type CP totally-enclosed fan-cooled motor.

This motor consists of a skeleton type stator, deeply grooved on the outside to increase radiation, which is provided with totally-enclosed ball bearing endplates with long machined fits to completely seal the working parts of the unit. An external blower, mounted on the front end, directs cooling air around the front endplate and over the corrugated surfaces and through a baffled-back endplate down over the bearing. The movement of the air is directed over these surfaces by specially designed blower and frame shields. The shaft of this motor is made of special alloy steel for strength and has machined fillets at all changes of diameter to prevent fatigue. The ball bearings are all of the cartridge type and are of the same diameter on both ends to permit double shaft extensions of the same diameter. The front end bearing carries the thrust while the back bearing is of the floating self-aligning type. The cartridges are normalized before machining in order to obtain close tolerances. They are also designed so that complete lubrication can be carried out during operation. No cored holes are used for introducing grease. The caps of the cartridges are also specially designed to prevent entrance of water along the shaft. The endplate on the back end is of the one-piece deflector type to aid in keeping the bearing cool. Both endplates are provided with threaded air gap holes to make air gap checking an easy task. The core of these motors is in the center of the frame to permit reversing of the endplates and rotor in order to reverse location of conduit box. The feet are electrically welded onto the frame and are made of unbreakable steel. All coils are wound with cotton-covered double-enameled wire with all free ends taped well into the slots. All coils are insulated from core by heavy fibre slot insulating material.

Wagner Motor

AIR FILTERS
Air-Maze Corporation

Air-Maze Corporation, Cleveland, Ohio, have recently designed a new type filter unit that will not only render service as an air cleaner but will also withstand any backfires that may occur.

The interior construction of this new unit follows in general the field proven Air-Maze principles. The top or hood of the new filter is fitted with a complete backfire valve assembly mounted on a web casting which screws onto the filter stem. The valve rests on leakproof gaskets and is spring loaded; it quickly returns to normal position after relieving pressure. The valve may be quickly removed and the entire filter disassembled for inspection of servicing.

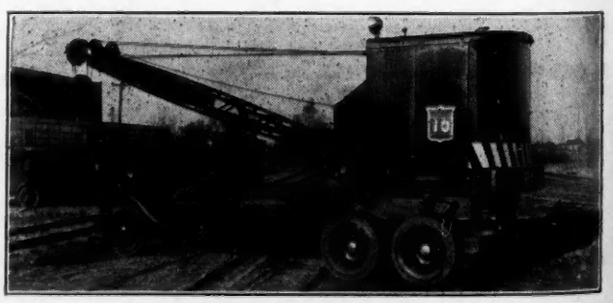
Air Maze Filter

This unit is available in a number of sizes and is adaptable to interior or exterior mountings.

PORTABLE CRANE
BAY CITY SHOVELS, Inc.

Bay City Shovels, Inc., Bay City, Michigan, announce a new portable crane. This equipment will handle a 5-ton load on a 25-foot boom at a 10-foot radius with outriggers set. It will lift 3 tons under the same conditions with stabilizers. It can be mounted to specification on a Ford, Chevrolet, Dodge or International truck with Thornton rear assembly or on any standard 5-ton truck.

Drive is by means of a 6-cylinder Hercules gasoline engine rated at 46 horsepower at 1,400 rpm., a Ford V-8 engine or a Hercules Diesel. Hoist cable is ½-inch, rides



Bay City Portable Crane

on a 12-inch hoist drum. Lifting pull on a single line is 6,500 pounds.

The outrigger for heavy lifts is a structural sliding beam. The stabilizers are standard screw jacks positioned to take the load from the rear wheels. The lower base is made of alloy steel with an integral counterpoise and an internal swing gear. This base supports the rotating base, also a steel casting with integral machinery side frames. Hook-type conical rollers take thrust from the center post. A positive swing lock can be operated with the cab in position. The cab is made of 10-gage plates.

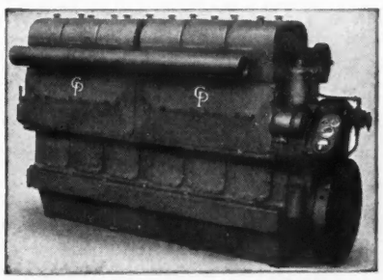
Operating control is centered at three levers and foot brakes located in front of the operator's seat. The control movements through external contracting-band clutches and brakes of similar construction. Swing and propel are manually operated.

The boom used for crane, clamshell and dragline operation is in lattice construction 25 feet in length. The shovel boom measures 11 feet and the dipper stick is the same length. A ditcher boom measures 14 feet overall.

HEAVY DUTY DIESEL ENGINES

Chicago Pneumatic Tool Company

Chicago Pneumatic Tool Company, 6 East 44th Street, New York, is presenting four models of Diesel engines incorporating late developments in construction, improved design and combustion control. These engines are of the 4-cycle, direct injection type, especially designed for medium speed and continuous duty. Model 38 CP is a 3-cylinder engine of 90 horsepower, 48 CP, 4 cylinders, 125 horsepower, 68 CP, 6 cylinders, 187 horsepower, and 88 CP, 8 cylinders 250 horsepower.



Chicago Pneumatic Diesel Engine

Fuel economy, it is said is obtained through the use of a specially designed fuel chamber. All wearing parts are completely enclosed. The engine is positively and automatically lubricated by means of an accessible engine-driven gear pump which draws oil from the supply sump in the base, and forces it through a filter and cooler to all parts of the engine. Positive pressure lubrication of the valve gear promotes quiteness and long life, and the entire absence of small oil piping eliminates a source of breakage.

The fuel system is simple and efficient. The engine-driven fuel transfer pump draws fuel from the storage tank and forces it through a filter to individual Bosch fuel pumps where short lines connect the pump to the nozzle.

Instant starting is provided by a simple starting valve which admits air to a camshaft-driven rotary distributor. Typical stationary applications of this unit are for generator drives, power drives, compressor drives. Mobile and portable applications are for locomotives, shovels, oil field drilling and pumping units.

CHAIN WRENCH

Owatonna Tool Company

Owatonna Tool Company, Owatonna, Minnesota, is introducing No. 887 universal chain wrench, which is a particularly handy tool for use on smooth or corrugated surfaces and on square, hexagonal, octagonal nuts or rods, valves, miscellaneous pipe fittings in close places where extreme leverage is not needed. The wrench is so compact it can be carried in an overalls pocket and has a capacity from ½ inch to 4½ inches.

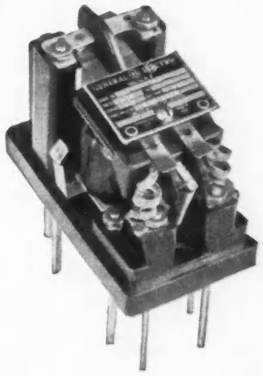
No. 887 Chain Wrench

AUXILIARY RELAY

General Electric Company

General Electric Company, Schenectady, New York, offers a new auxiliary relay that can both open and close a circuit and operates on either alternating-current or direct-current circuits. The new relay is made in double pole arrangement, with either two or four contacts. It can be furnished with the operating coil for one to five amperes d-c; 6, 12, 24, 32, 48, 125, and 250 volts d-c; or 115, 230, 460, and 575 volts a-c. By adding an external resistor it can also be used on higher-voltage d-c circuits.

The relay is compactly designed and has both base and cover of black molded compound. The cover is held on by heavy spring clips mounted on the base, providing for ready removal or replacement. A glass window in the front is an optional feature.



GE-HGA Auxiliary Relay

The stationary contacts are silver tipped and are doweled to the base to assure positive line-up with the moving contacts while the latter, also silver tipped, are mounted on a molded carrier attached to the armature. This carrier is arranged to form a barrier between the movable contacts, increasing the striking distance. The contacts will make and carry 30 amperes for one minute of 12 amperes continuously.

All the parts in the magnetic circuit are made of silicon steel and are cadmium plated. In addition to the low residual provided by the silicon steel an air gap is introduced in the magnetic circuit by a small non-magnetic shim to prevent sticking of the armature on residual magnetism.

An adjustable phosphor-bronze spring aids the weight of the armature in providing pressure on the normally closed contacts. The relay is back connected with contact studs of sufficient length to mount on panels up to two inches in thickness.

PUMPING UNIT

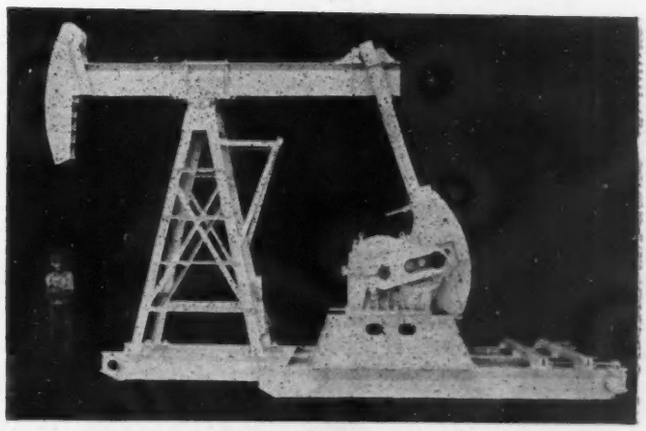
International Supply Company

International Supply Company, Tulsa, Oklahoma, offers the new improved ISCO Pumping Unit, designed for sudden torque shock and high capacity load. It accommodates a wide range of counterbalancing with maximum flexibility, convenience and safety, with conservative ratings based on engineering research and field experience.

It is specially designed for lower installation and operating costs without sacrificing strength, and capacity, and easy portability.

Polished rod loads of 8,000, 12,000, 17,000, and 22,000 pounds with corresponding stroke ranges of 21 to 36, 24 to 54, 24 to 64, and 24 to 74 inches respectively.

Features of the unit include weather-proof oil-bath lubrication, enclosed grease-packed bearings, gas, gasoline, Diesel or electric power, centralized operators control of clutch and brake, adjustable countershaft, ample clearance for well servicing, based on API capacity walking beam and gear box, derrick type sampson post, both rig front and back crank installation, horsepower 10 to 50, long stroke for high recovery and low cost, main skid accommodates prime mover, short base for separate engine mounting, removable arc type horsehead and underslung type hanger, welded construction.



International Supply Company Unit

CATALOGS...BULLETINS

Helpful Publications Which Manufacturers Will Be Glad to Send Free for the Asking

Spray Nozzle Catalog

Yarnall-Waring Company, Chestnut Hill, Philadelphia, Pa., have issued bulletin N-615 covering the Yarnall Involute Spray Nozzles for general industrial use.

Centrifugal Pumps

Fairbanks Morse & Company, Chicago, has issued Bulletin 5814F which describes its ball-bearing centrifugal pumps, especially designed to satisfy the requirements of fire underwriters. F-M centrifugal fire pumps are highly efficient units, instantly ready to operate at full capacity and pressure. They provide a steady, non-pulsating flow with uniform pressures, and at shut-off or maximum pressures can operate against a closed valve without damage to pump mechanism or connecting pipe. The pumps are offered with electric motor, gasoline engine, steam turbine, dual motor and engine, and dual motor and turbine drives.

Motorpump

Ingersoll-Rand Company, 11 Broadway, New York, N. Y., has just issued a new catalog describing its Cameron Motorpumps. These pumps are compact machines combining electric motor and centrifugal pumps in a single unit. Capacities range from 5 to 1000 gallons per minute for heads to 500 feet. Motor sizes range from ¼ to 40 horsepower.

Ventilators

Burt Manufacturing Company, Akron, Ohio, has issued Bulletins SPV-8 on the Standard Gravity Ventilator and SPV-14 on Dampers and Damper Controls.

Slush Pump

The National Supply Company of Delaware have issued Bulletin No. 140 covering the Ideal Steam Slush Pump, 14½ x 7½ x 18—Type C. This bulletin is illustrated and describes in detail this patented steam slush pump.

Bulletin No. 141 covers the National Sucker Rod Snap Wrench Type B. This wrench is a recent development and offers a number of new and unusual features and advantages. This bulletin will be forwarded upon application to The National Supply Company stores or home office.

Vertical Compressors

Worthington Pump and Machinery Corporation, Harrison, N. J., is mailing an eight-page illustrated Bulletin L-621-B5, compact presentation of the Worthington line of vertical single-cylinder, single-stage, air-cooled and water-cooled compressors. Sectional views showing important features of construction, detailed specifications of the feather-type valves and other principal elements, rating tables, and dimension tables, are included. Bare compressors, and base-mounted units with motor and V-belt drive, are covered in the tables. Illustrations show also units complete with vertical or horizontal air receiver, direct-connected to electric motor, direct-connected to gasoline engine, and three-cylinder and six-cylinder angle-type two-stage units in various arrangements.

Ask for Bulletin L-621-B5.

"The Welding of Enduro Stainless Steel"

"The Welding of Enduro Stainless Steel" is a new 20-page booklet just published by Republic Steel Corporation, Cleveland, Ohio. Profusely illustrated the booklet describes in detail the proper methods for welding stainless steel by electric arc, gas, seam, spot, projection and atomic hydrogen methods. Also included is information on brazing and silver soldering. An interesting feature is a table showing in condensed form the physical, electrical and mechanical properties of thirteen of the more important types of Enduro Stainless Steel, contrasted with similar properties of a carbon steel, S.A.E. 1020.

Flow Meter

A new 40-page catalog on Bristol's electrical and mechanical flow meters is available for distribution by The Bristol Company, Waterbury, Conn. These instruments are for recording, integrating, controlling, and indicating the flow of steam, liquids or gases. Details are given regarding the new electric flow meter and its operation, using Bristol's Metameter principle of telemetering. Also, complete information is included on Bristol's mechanical flow meters. The publication contains useful engineering data for reference.

Compressor

Ingersoll-Rand, 11 Broadway, New York, has published Bulletin No. 3165 covering its Type XVG Gas-Engine-Driven-Compressor. The bulletin is very complete and attractively gotten up and completely illustrated, showing not only sectional views of these compressors but also a great many installations.

Blower and Compressor Bulletin

Allis-Chalmers Manufacturing Company, Milwaukee, Wis., has issued a new Blower and Compressor Bulletin, No. 1910, intended to show briefly all the types made by that company. These include centrifugal, rotary and reciprocating units which can be furnished complete with their prime movers, whether electric motors, steam turbines, or steam engines, for all ordinary applications involving air or gas.

Engine-Driven Welders

Westinghouse Electric and Manufacturing Company, East Pittsburgh, Pennsylvania, in a recent bulletin describes its engine-driven welders, including performance curves of the welder, fuel consumption curves of the engines and general descriptions of the welders and power units.

Tractors

"Caterpillar" Products On the Job in the Petroleum Industry" is the title of a new booklet just issued by Caterpillar Tractor Company, Peoria, Illinois. "Caterpillar" track-type tractors transporting and starting equipment, digging slush pits, constructing oil field roads, working on pipe line jobs and doing miscellaneous tasks around the refinery are illustrated and described. "Caterpillar" Diesel engines are shown drilling and pumping. Ask for Form 4194.

Union

The Rockwood Sprinkler Company, 38 Harlow Street, Worcester, Massachusetts, has issued a bulletin describing in detail the new Rockwood "Dualsteel" union. It is profusely illustrated.

Pipe Cutting Machine

Murchey Machine & Tool Company, Detroit, Michigan, has issued a bulletin describing its new Model "F" Roller Pipe Cutting-Off Machine.

Fire Protection

"108 Extra Values" is the title of a new 16-page brochure which is being distributed by Walter Kidde & Company, Bloomfield, N. J. The booklet is a well illustrated engineering treatise on every phase of "Lux" carbon dioxide fire protection equipment. Those interested particularly in electrical or flammable liquid fire hazards will find it of great value.

Water Meters

Well Machinery & Supply Company, Fort Worth, Texas, has issued a modern, splendidly assembled brochure on Calmet water meters.

Diesel Engines

The Caterpillar Tractor Company, Peoria, Illinois, has published a booklet called "Solving Pumping Problems with Caterpillar Diesel Engines." It deals briefly with pumping problems and gives illustrations of Diesel engine performance both in the United States and abroad.

Pump

Thompson Pump Company, Okmulgee, Oklahoma, has recently issued a new catalog describing in detail the new inverted combination plunger and cup pump.

Steam Trap

W. H. Nicholson & Company, 12 Oregon Street, Wilkes-Barre, Pennsylvania, has issued bulletin No. 337 covering the "Nicholson" industrial steam trap. This trap is constructed for high pressures and severe service. It embodies a new balanced-pressure principle in bellows construction which permits opening and closing a very large valve, giving the trap large water and air discharging capacity. It is an intermittent flow trap.

Paint

The National Supply Company, Toledo, Ohio, has issued a new bulletin covering its line of paint which is unusually complete and covers the entire industrial field.

Roofing Material

Johns-Manville, 22 E. 40th Street, New York City, has issued a 36-page brochure containing complete detailed specifications on all J-M built-up roofs. Twenty-two pages are devoted to these specifications and plentiful drawings illustrate the manner in which the roofing materials are to be applied to various types of roof decks. Various methods of base and cap flashing are outlined, together with diagrams which show how flashing should be installed.

There is a complete discussion of the various types of roofing materials and the qualities which determine their ability to stand up under fire, weather and wear, and the important subject of roof insulation are also gone into in detail.

Bolted Tanks

Butler Manufacturing Company, 13th and Eastern Avenue, Kansas City, Missouri, has issued a new bulletin on its Butler Bolted Tanks. Attractively illustrated, this bulletin shows in detail the various features of the construction of these products.

Diesel Engines

Chicago Pneumatic Tool Company, 6 East 44th Street, New York City, has recently issued Bulletin No. 768 covering its Type 8 CP Diesel engines for continuous heavy duty, made in 3 to 8 cylinders ranging from 90 to 300 horsepower.

Pump

Goulds Pumps, Inc., Seneca Falls, New York, announces publication of a new catalog covering its broad lines of centrifugal, reciprocating and rotary pumps for industrial service. Each pump is presented completely with description, illustrations, specifications, ratings, and when desirable, dimensions. The new book, 80 pages thick and attractively covered, is a real guide for those interested in pumps for industrial use.

USE THIS COUPON
(Address manufacturer direct)

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Please send me, without obligation, free booklet described in THE OIL WEEKLY of July 5, 1937.

NAME.....

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This Week with the Industry's EQUIPMENT SUPPLIERS

James P. Ratigan on Trip to Europe

James P. Ratigan left Los Angeles recently for a trip to England, Ireland and Scotland, where he will combine business and pleasure for several months.

During his sojourn in Ireland, the land of his birth, Ratigan will visit his brothers, sisters, and a number of old college friends. Returning, he will sail from Queenstown Harbor, Ireland on September 22, arriving in this country in time to attend the Oil World Exposition to be held at Houston in October.

J. P. Ratigan Back to Ireland

Clark Bros. Company Merges With Dresser

Official announcement was made June 24 of the merger of Clark Bros. Company, Olean, New York, with S. R. Dresser Manufacturing Company, Bradford, Pa., thus verifying rumors current for some time that such a consolidation was pending.

Clark Bros. Company is a prominent builder of 2-cycle gas engines and compressors, having pioneered many of the improvements that have been made in gas-engine design in the 57 years it has been in business.

Equally as old and well-known is S. R. Dresser Manufacturing Company, manufacturer of flexible pipe joints used on many of the country's largest and longest gas-transmission lines. It also manufactures a complete line of pipe line repair devices. A Canadian subsidiary, Dresser Manufacturing Company, Limited, of Toronto, was established in 1931.

Both Dresser and Clark have served the gas and oil industries for over half a century. In recent years, Dresser has entered the gas-engine field with a new radial-type gas engine and compressor of its own, of 2-cycle design. It is believed that the engine operations of both companies may be consolidated at Olean in the near future.

It was learned that the merger was effected by the exchange of some Dresser Class A Treasury stock for the capital stock of Clark Bros. Company.

In June, 1933, S. R. Dresser Manufacturing Company acquired Bryant Heater Company, of Cleveland, manufacturer of gas boilers, furnaces, conversion burners, unit heaters, and air-conditioning equipment. According to announcement then, Dresser felt that by this move it could contribute materially to the building of greater gas loads.

In the acquisition of Clark Bros. Company, observers also see a continuation of this program of constantly widening usefulness to the gas industry. Through this new association, with its combined resources for research activities and with its interchange of engineering knowledge and experience between the three companies, it is felt that new and significant improvements in products for the utilization of gas will be made possible.

The officers of Clark Bros. Company are C. P. Clark, president; J. B. O'Connor, vice president; and of S. R. Dresser Manufacturing Company, Fred A. Miller, chairman of the board; H. N. Mallon, president; and M. N. Davis, executive vice president.

Maintenance Engineering Moves to Larger Quarters

Maintenance Engineering Corporation, Houston, Texas, formally opened a new plant at 3611 Clinton Drive June 28 by being host to the Houston Purchasing Agents Association. Including some friends of the association members, approximately 130 men were served lunch, following which a tour of inspection was made through the plant. C. E. Naylor, chairman of the board of directors, and Joe Peddie, president of Maintenance Engineering Corporation, welcomed the guests in brief talks, and O. D. Story, president of the association, responded.

The recent move to new, enlarged quarters coincidentally celebrates the thirteenth anniversary of Maintenance Engineering Corporation. This company's position today as factory representative for numerous leading manufacturers of oil industry equipment throughout the nation with its staff of 45 men occupying 60,000 square feet of plant on a 2½-acre site is a far cry from its beginning in 1924, when C. E. Naylor directed all business in one rented room with a single assistant.

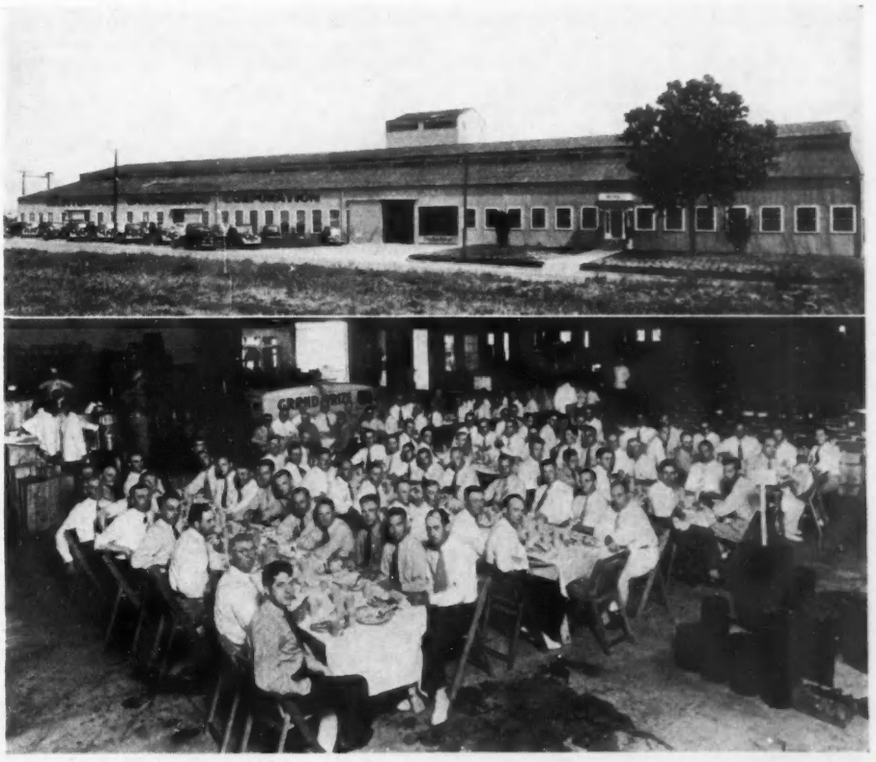
The new plant is equipped with welding and shop facilities for fabricating special hook-ups to oil company specifications, and with a most modern water testing laboratory. The plant is served by a spur railroad siding for delivery of shipments direct to warehouse stocks, and complete facilities for rapid truck loading from these stocks.

Johns-Manville Announces Two New Manufacturing Units

Lewis H. Brown, president of Johns-Manville Corporation, 22 E 40th Street, New York, has announced that negotiations have been completed for the acquisition of two new properties by Johns-Manville Products Corporation.

In Watson, suburb of Los Angeles, an option to purchase a 50-acre plot of land has been acquired; and as soon as possible construction will start on the first unit of a new million-dollar factory there.

This new plant will produce rock wool home insulation and asbestos-cement pipe, which in the past have been



Maintenance Engineering Corporation celebrated moving into larger quarters (pictured at top) with a party at which this crowd was entertained

produced by Johns-Manville only at its Mid-West and Eastern plants.

When completed early in 1938, the new plant is expected to employ approximately 300 men. Initial plans call for the erection of two cupolas for the production of rock wool home insulation, and facilities for pipe production will be installed as quickly as possible.

The second new plant was announced upon completion recently of negotiation for the purchase of the Richmond, Indiana, plant of Fibre Conduit Company, which is consolidating its manufacturing activities at Orangeburg, New York. About July 1 Johns-Manville intends to begin installation of equipment for the manufacture of a new type of low temperature insulation recently perfected in the J-M Research Laboratories, and which is covered by basic patents. Characteristics of the product include high insulating efficiency and lightness in weight which adapt it particularly for use on railroad, passenger and refrigerator cars, mechanical refrigerators, and for sound deadening as well as thermal insulation on automobile bodies.

When operations get under way it is expected that this new Richmond unit, will employ about 150 people.

Johns-Manville's business was established 79 years ago and today this company is one of the most diversified of American manufacturers, selling to and serving all basic industries. A leading manufacturer of building materials, it is also one of the largest producers of industrial insulations and refractories, acoustical products, brake linings, packings and other lines.

The two new plants will provide this company with a total of 12 factories in operation in the United States. The others are located at Manville, N. J., Nashua, N. H., Oswego, N. Y., Alexandria, Ind., Waukegan, Ill., Marrero, La., and in Lompoc, Redwood City, Pittsburg, and Los Angeles, all in California.

Johns-Manville also has a large factory and asbestos mine at Asbestos, Quebec, a limestone quarry at Alexandria, Ind. for the production of rock wool, a diatomaceous silica quarry at Lompoc, California, and an asbestos mine at Chrysotile, Ariz. A factory for the manufacture of asbestos-cement building products is operated by this company in Moll, Belgium.

W-K-M Company Distributes Murphy Diesels

W-K-M Company, Houston, Texas, announces its recent appointment in the oil country as the exclusive distributor and factory branch of the line of Murphy full Diesel engines.

These engines are built in two sizes: 4-cylinder, 100 brake horsepower; and 6-cylinder, 150 brake horsepower, and are recommended for drilling rigs, generator sets, pipe line service, or for any type of service where light weight per horsepower is an important factor. The 4-cylinder, 100 horsepower unit complete weighs 5800 pounds and the 6-cylinder, 150 horsepower unit complete weighs 7000 pounds.

Mason Neilan Regulator Company Opens Los Angeles Branch

Mason Neilan Regulator Company, Boston, Mass., announces the opening of a Los Angeles branch at 1457 S. Concord Street. This branch will offer improved facilities for complete service including stocks for immediate shipment, servicing facilities for regulators, instruments, valves assembly and calibration of thermal units plus complete engineering advice on control problems.

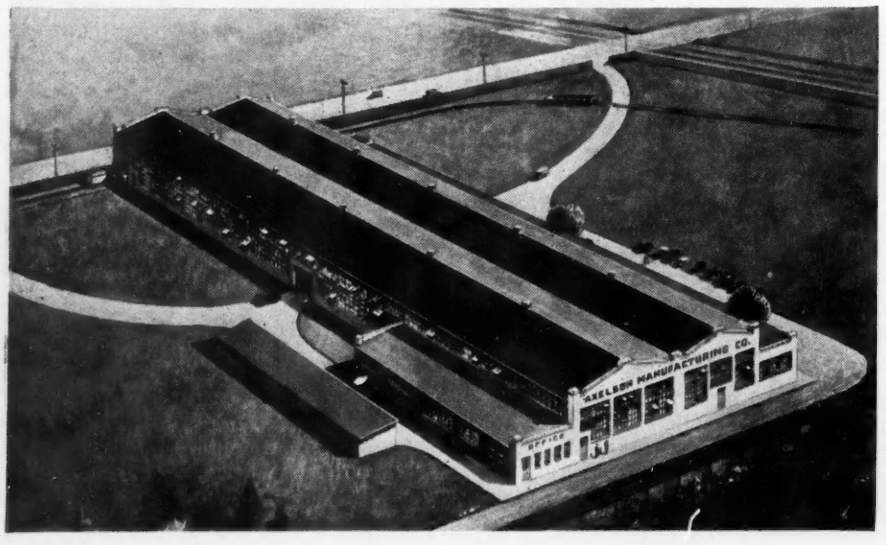
George J. Wyrough Joins Thermoid Engineering Staff

Thermoid Rubber Company, Trenton, N. J., announces the addition to its engineering staff of George J. Wyrough who will be assigned to production and product development work on industrial rubber products, including belting, hose and packings.

Wyrough is a graduate of Pennsylvania State College, Class of 1920, and has been in charge of technical work on belting, hose and packings for over 17 years with other mechanical rubber goods manufacturers.

Here's what you get when you play hooky from business. Jack Ballagh, Patterson-Ballagh Corporation, Los Angeles, went out into Aransas Pass off Corpus Christi, Texas, and snagged this ol' he-tarpon. Mister Tarpon objected strenuously but you can see how much good it did him. Specifications: Length, 5 feet, 8 inches; weight, 151½ pounds. (Ballagh is shown at the right).

Axelson Manufacturing Company's St. Louis plant which has recently been reconstructed to double its original size and capacity. In this plant are installed the most modern of normalizing and heat-treating furnaces and the most accurate machine tool equipment known. New laboratory facilities and new testing and checking devices permit accuracy in the manufacture of pumps and sucker rods.



Holder Buys Jewell's Interest in Business

C. B. Holder of Duncan, Oklahoma, has purchased the interest of Sam Jewell of Ada, Oklahoma, in the Holder-Jewell machine and welding shops in Oklahoma and Kansas. The business will continue to be operated as the Holder Welding Company.

Fred E. Cooper Will Entertain Tulsa Oil Men

Fred E. Cooper, Tulsa, Oklahoma, will be host to several professional and trade organizations allied with the oil industry at the plant at Hale Station on the Sand Springs road, Tulsa, on Tuesday, July 20 from 4:00 p. m. to 9:00 p. m. The groups include Tulsa A.P.I. Chapter, the Engineers Club, the Petroleum Motor Transport Association, and the Purchasing Agents Association. An inspection trip of the several departments of the establishment will precede a buffet supper to be served at 6:00 p. m.

Squeaks from the Bull Wheel

Pen Point?

Literary Man—Are you familiar with John Masefield?

Lowbrow Flapper — What d'you mean? I'm never familiar with any one.

Barber: "Hair-cut?"

Jellybean: "No, just change the oil."

No Complement

"That letter don't seem to have pleased you any," said the trainer to the heavyweight champion.

"It don't," said the boxer. "It's from a firm what wants to place an advertisement on the soles of my shoes."

Pickled

"Hoskins, the cook advises me that you were badly intoxicated last night and that you were trying to roll a barrel out of the basement. Can this be true?"

"Yes, my lord."

"And where was I during this time?"

"In the barrel, my lord."

Pay, Pay

"The woman always pays" indeed!
That maxim makes me roar;
You see I'm a collector
For a millinery store.

Small Adjustment

The salesman had just succeeded in selling the most expensive all-wave radio and was mentally spending the commission on the deal when his customer's voice brought him back to earth.

"There's just one little adjustment I'd like you to make."

"Yes, madam?"

"We're not fitted with electricity, so will you have it converted, please, for gas?"

Not Probable

A game called for each participant to represent the title of some famous book or novel. One elderly lady (who copped the prize) appeared with a large picture of the Dionne Quintuplets pinned across her gown. She said she represented Sinclair Lewis' latest novel, "It Can't Happen Here."

Efficiency

Tim: "How are you getting along at home while your wife's away?"

Jim: "Fine. I've reached the height of efficiency. I can put on my socks now from either end."

Romance

It was silent outside,
Like snow falling on velvet.
The quiet hush of the night
Stole between the
Transparent moonbeams,
Filling my soul
With strange disturbing dreams.
And there sat that damn girl
Eating hamburgers and onions.

Get Going

Villain: "Ah, my proud beauty, you are in my power at last!"

Heroine: "Well, what are you waiting for?"

Low Down

Two little boys stood on the corner.
A little girl passed by.
Said one: "Her neck's dirty."
Said the other: "Her does?"

A Hunch

In Chicago she was Sadie;
In Detroit he called her May;
In Duluth the name was Mabel;
But in Pittsburgh it was Fay;
She became Estell in Yonkers,
All of which suggests a hunch;
In his swindle sheet he calls her
Just plain gas and oil and lunch.
—*The Marathon Runner.*

Accurate Tuning

Two commercial travelers were swapping tall wireless stories in the presence of an old countryman whom they were trying to impress.

"You got a radio set?" asked one of the travelers.

"Yes, sorr," said the countryman. "I got a very good one."

"Does it have good selectivity?" asked the traveler, with a knowing wink at his companion.

"Well, yes," said the old fellow, "it has. The other night I was listening to a quartet, and I didn't like the tenor, so I just tuned him out and listened to the other three."

Shake

What are you going to do this summer?

Work in my father's office. What are you doing?

Oh, nothing either.

Shake!

Said one salesman, "I made some very valuable contacts today."

The other salesman replied, "I didn't make any sales either."

Nevermore

The landlady of a popular boarding house in the mountains made a point of asking her departing guests to write something in her visitor's book. She was very proud of some of the names of the people inscribed in it, and of the nice things that they wrote.

"But there is one thing I can't understand," she confided to a friend, "and that is what a sour-looking man put in the book after stopping here. People always smile when they read it."

"What was it?" queried the other.

The landlady replied: "He wrote only the words 'Quoth the Raven'."

Settled

An Englishman, an Irishman and a Scotsman were arguing as to which of their respective countries had the lightest men.

The Irishman, full of tilt at the obvious, led with, "We have men of Cork."

The Scotsman, "Yes, but we have men of Air."

"But," said the Cockney, "we have lighter men on the Thames." It was enough.

Heeter's Packers and Swabs

For over a quarter century the name of C. M. Heeter Sons & Co. has been known to the oil men of America.

Heeter's Improved Patent Swabs, Corrugated Friction Sockets, Wire Line Pumping Outfits, Sand Pumps and other Gas and Oil Well Materials.

May we send you our catalog showing complete line?

C. M. Heeter, Sons & Co.
(Incorporated)
Main Office and Works, Butler, Pa.

ENGINEERS WANTED

Sperry-Sun Well Surveying Company, Houston, Texas, has opening for two college graduate engineers, preferably mechanical, with one or two years production experience. Address written application in own hand writing giving information regarding education, past experience and present salary to 3118 Blodgett Avenue, Houston, Texas.

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